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EDITORIALLY SPEAKING

DISEASE OR HEALTH?

The language of pathology seems to be invading the terminology of education. "Diagnostic" bids fair to supplant "objective" and "standard" as terms descriptive of tests by which the intellectual status of school children may be discovered. Naturally enough "remedial measures" and "remedial teaching" follow in its wake. "Disease" is scheduled to appear shortly, unless the American sense of humor asserts itself in time to prevent it.

Diagnosis and remedy seemed good enough when the reference was to cases out of the ordinary — below, that is, the level of attainment which was judged proper to the given age, physiological or other. Instances in which physical or other defects were almost certainly present naturally suggested the words, and their application served a useful purpose.

When it comes, however, to applying these terms to all testing whatsoever and to teaching policies suggested by the results of it, the matter is quite different. Classes not up to "standard" in some particular are now constructively diseased; the doctor must hurry with his medicine case. The school as a preparatory institution is succeeded by the school as a hospital and the last state of that institution is worse than the first. Healthy childhood becomes a thing of the past and all teaching resolves itself into the application of nostrums.

By comparison Froebel's "garden" and Montessori's House of Childhood stand out as marvels of insight — the school as a place in which children may live and grow, in the companionship of each other and of wise and sympathetic elders. Like all good things the science of education bids fair to display to a distressing degree the defect of its quality. The American obsession for efficiency will, if we do not have a care, lead us to the endless belt and quantity production which have provided the rank and file of the population with flivvers all just alike. To change the figure, the teacher may now aspire to the lofty heights long since attained by the village horse doctor.

A NEW PROGRAM IN PHYSICAL EDUCATION[1]

FLORENCE D. ALDEN

Director, Department of Physical Education for Women, University of Oregon, Eugene, Oregon

Never in our history has Physical Education made such strides as in the last two years, and never has it passed through such a period of questioning, of scrapping old ideas and inaugurating new ones.

One of the phases that is being strongly stressed now is the more careful adaptation of work to individual differences — consideration of the weak as well as the strong, the unskilled as well as the skilled, and more thought put upon age and sex differences. In our "required work," with the regular classes, and our corrective work with special groups, we have been doing this, but in the field of games and sports it has not been as carefully thought out. Our athletics have tended to be run for the upper one-third. It was this upper one-third who could win the prizes or championships, who could break records, draw audiences, and bring athletic reputation or commercial advantage to the school. More and more the feeling is swinging against this intensive training of the few at the neglect of the many. Programs are being planned with a view to meeting all varieties of organic vigor, of skill and of taste. Many schools are offering a classified and graded list of sports, ranging from quoits, archery, and canoeing up through golf, volley ball, and tennis to swimming, basket ball, and hockey. After the student's class has been determined by tests of organic vigor, he is given freedom of choice of the sports in his class. At the end of a semester or a year he makes another choice so that he receives a fairly all-around training, and in the course of four or five years he has learned to play several games well.

At the University of Oregon, running parallel to this program are Do-nut and class contests in several sports. The Do-nut contests are between the living houses and the others between the freshmen, sophomore, junior, and senior classes. In the class contests each class may put out as many teams as it wishes — first, second, third, and so on, so that not just the best players but everyone who is interested has a chance to compete. As the victorious class is the one that wins the largest percentage of the games played, there is an incentive to turn out as many teams as possible. In order still more to stimulate all, the Athletic Association has a point system. For winning five hundred points the girl receives a small O, for one thousand points she receives a large O. She may win these by playing on the first class team in more than one sport for three or four years, but she may also win it by a combination of fifth team or Do-nut team places in several sports, for instance, or a combination of fourth or fifth team places and hiking, passing a dancing test, and making a good score in the Caucas Race.

[1] Given at the International Health Education Conference, San Francisco, California.

Thus not only the few specially athletic girls are stimulated and rewarded but the ordinarily active, all-around girls as well. The award, costing but a few cents, is valued most highly. By these plans an effort is made to meet the needs and desires of every girl, and to establish recreation habits and tastes that will continue through life.

More and more attention is being paid to the type of sports and athletics fitted for younger boys and girls. Too long our high school athletics have been a cheap imitation of the college brand. Basket ball is too commonly played by Junior High School girls and younger. Why do this when there are such excellent games as volley ball, bat ball, hit pin ball, captain ball, etc? One reason is that no group of women has gotten together to standardize these games as they have basket ball, hockey, and others, and as a result the games have many radical faults, such as unequal offense and defense, too strict or too lax rules — faults that destroy the interest. Another difficulty is that the rules of these games are hard to find. Every little rural school knows that the basket ball, hockey, and swimming guides may be bought in any Spalding store for ten cents a copy, but where can they find hit pin ball? In the Basket Ball Guide Book for 1923–1924 will be an article by Miss Lydia Clark on the types of games advisable for girls below the basket ball age, and telling where the rules may be obtained.

Too long, also, our girls' work has been men's work warmed over. Unless girls are a cheap imitation of men, why give them cheap imitations of men's work? The Track Athletic Committee, recently appointed by the General Committee on Women's Athletics, has taken a most scientific stand on this subject in their determination to go slowly until they know what is adapted to girls. For mechanical reasons, such as the low center of gravity, the broad pelvis, etc., the girl who excels in most track events is the one who is built like a man — heavy of shoulder, narrow of pelvis and slender of limb. Do we want generally to advocate events fitted to that limited class only and stressing the more masculine type? The Track Committee is experimenting and doing research work and will soon have some valuable data to offer. The Baltimore Playground Athletic Association held this year a meet of 2,800 girls, ranging in ages from the kindergarten to the older women in the night recreation centers. All the events were strictly girls' events. They ranged from an egg and spoon race for the little tots, shuttle relay, dodge ball, etc., for the younger girls, up through field ball throw, golf drive, and basket throwing relay for women over twenty-one. In the selection and administration of this, the age and sex were carefully considered. The whole thing was planned, managed, and judged by *women* trained in Physical Education standards.

Another phase that everyone is working upon is the problem of interest. The need of interest in education is too generally accepted for any discussion of the theory to be necessary. The new movement in Physical Education is making rapid strides in the practical application of this principle. In games the problem is fairly easy. In gymnastics and dancing the method is not

to sugar-coat or attach an extrinsic interest by holding out some remote benefit, but to link it up with the child's inherent interests, with his experiences outside of the school, and to base it on the dramatic and competitive instincts at our command. This is being done in our mimetic exercises, our story plays and dramatic dances. Columbia University offers "Natural Gymnastics," as it is called. Their drill work is based upon the technique of games and athletic events and trains definitely in the skills necessary for these.

To motivate our regular work with the girls, we utilize the spirit of competition in the form of a "Caucas Race." You remember that in *Alice in Wonderland* the Dodo says:

> "The best thing to do would be a Caucas Race."
>
> "What is a Caucas Race?" said Alice.
>
> "Why," said the Dodo, "the best way to explain it is to do it."
>
> First it marked out a race-course, in a sort of circle ("the exact shape doesn't matter," it said), and then all the party were placed along the course, here and there. There was no "One, two, three, and away!" but they began running when they liked, and left off when they liked, so that it was not easy to know when the race was over. However, when they had been running half an hour or so, and were quite dry again, the Dodo suddenly called out, "The race is over!" and they all crowded around it, panting, and asking, "But who has won?"
>
> This question the Dodo could not answer without a great deal of thought, and it sat for a long time with one finger pressed upon its forehead (the position in which you usually see Shakespeare, in the pictures of him), while the rest waited in silence. At last the Dodo said, "*Everybody* has won, and all must have prizes."

In our Caucas Race everybody wins. The girls are scored on some elements of the physical examinations such as increase in chest flexibility, posture, grip, some events taken from the floor work, such as deep knee bending and prone falling, some apparatus work such as rope climbing and swing jump, some stunts such as somersaults and tip-up on the stall bars, and some sport events such as baseball pitching and basket ball shooting. The scoring system is an adaption of Reilley's.[1] A maximum is set beyond which no points are scored in order to prevent strain and the winning of too many points on one event, and a sliding scale of scoring is used which stimulates the girl to keep on trying. The class scores are averaged and announced on Field Day. This utilizes many types of the spirit of competition — the desire to beat one's own record, the pleasure in coming up to a standard, the joy of getting ahead of some one else, and the satisfaction of contributing to the group. As everyone's score adds something, even the least skilled are stimulated to improve. This has served to vitalize the work very strongly.

Much time is given in most schools to posture training. We may give posture drills daily to the end of time, but if the *ideal* of posture and the *desire* for it are not present we will obtain small results. The seniors in our training school of Physical Education put over a posture

[1] See Reilley, *New Rational Athletics for Boys and Girls.*

drive this spring with the double purpose of learning how to do such things for their future positions and for the effect on the University girls. In order that — as they expressed it — the girls might "get some kick out of it," it was put over with all the pomp and splendor of a political campaign. Advance press work in the college paper was used and also posters with punch, such as "The Daily Doings of the Hump Family" (apologies to the Gump Family). They tagged the trees and statues that carried themselves poorly. There were rhymes, skits, songs, stunts, and movies. As posture is not a matter of Physical Education alone, the Psychology Department took up the psychology of good posture, the Educational Department discussed posture as a vocational asset, the Art Department dwelt on the beauty of posture, etc. On the final night the girls went to the different houses and gave the posture test to all, presenting a Perfect Posture tag to those passing. The house holding the largest percentage of tags received a bronze plaque made for us by the Sculpture Department. More attempts of this sort to enlist popular interest would do much to put our work over into the lives of the girls.

Into the field of dancing especially have come new life and interest. The interpretative dancing so many are giving now is truly educational. It is based upon firm principles of anatomy and kinesiology, and in its fundamentals gives strong corrections of ordinary postural faults and a splendid smooth, all-around development. It aims directly at establishing habits of relaxation, so much needed in our hurried, tense lives. It is happy, joyous, and spontaneous, for the child is given a chance to express what the music means to him — not what it means to the teacher — and after he has gained the technique and control necessary, takes genuine pleasure in expressing it with the body as his instrument. He learns music not merely on the side of rhythm but phrasing, tone values, moods, and how to express them. His pleasure in self-expression and his creative powers are given play by little pieces of original work. He learns color values with costumes, flowers, and background, line and group values, in making and remaking groups. It is full of content, rich with meaning and feeling, and withal, free and happy.

The attempt to vitalize the medical and physical examinations is another happy movement in the new Physical Education. For years our children have patiently endured these as a necessary evil, but that there was any possible connection between them and their physical activities and hygienic living has seldom dawned upon them. In Oregon each girl receives a test for organic vigor, a medical examination, an orthopedic examination, and a schematogram of her posture. Then, with all this data and her history card, she goes to a final "station." Here the doctor, or the physical director, has a friendly, unhurried talk with the girl. Her faults, disabilities and needs are gone over carefully, what the University offers as means for the betterment of these is pointed out, and an effort is made to put the main responsibility for improvement upon the girl herself. Follow-up work is done where necessary.

At the next examination improvement is checked up: Is there improvement? If not, why not? This method has changed the whole spirit of the examination period and made it of much greater value to the girls.

The progress in the development of tests for our work is most encouraging. Many are seeking to define physical efficiency and to evolve a series of tests for it looking toward the possible finding of physical quotients to correspond in function to the intelligence quotients. Classification tests are valuable. The Western Society of Directors of Physical Education in Women's Colleges is doing some experimental work with the Schneider Test as a possible workable index of organic vigor. The tests for classifying the child not only as to his organic strength but as to his skill and quickness of reaction help to place him in his right group so that he is not held back by the less skilled or spurred beyond his powers by the more skilled.

Some of the Pentathlon and Decathlon tests, the Reilley test, the Caucas Race, and others serve many purposes. They make clear and definite some immediate objectives both to the child and the teachers and mark the progress toward these objectives. They stimulate the interest of *all*. They serve as a method of grading. They show to the teacher herself the quality of her work and the efficiency of her methods. They offer to the supervisor a means of keeping up standards and of comparing the work of different schools. As the tests become more and more scientifically worked out, they will serve to prove to ourselves and to others whether or not *we* are getting results in physical education.

We are fond of claiming that we, above all other educators, develop leadership, initiative, the square-deal, the power of impersonal judgment, etc. But are we really doing it, and are we doing it in a form that transfers to life situations? Doctor Jesse Williams in his article, "Education of Emotions Through Physical Education,"[1] has shown us that games and sports in and of themselves do not develop these desirable traits. If this were true, he says, "professional baseball players who engage during the season in 154 games of baseball would be the most successful examples of self-sacrificing, social human beings." The coach must reward and praise clean, open play, good sportsmanship and self-control, and make unprofitable tricky play, crabbing, and producing alibis. Thus by persistent, untiring effort, a definite ideal of sportsmanship is developed. The term "sportsmanship" in itself is too abstract and too general to take a hold upon a child's mind. Detroit has done a great deal along this line.[2] They are trying to break up the abstraction into concrete terms descriptive of *acts*, and then to score the children on these tangible elements. The children evolve their own code of sportsmanship out of their own experience. The instructors stimulate sportsmanship songs and last year a dinner was given to which was sent the best all-around sport from each school. By this method they build up a concrete standard.

[1] *Teachers College Record*, Vol. XXI, May, 1920, p. 201.
[2] "A Study of Sportsmanship," by R. C. McLain, *American Physical Education Review*, Vol. 27, pp. 164–168, 212–217.

Dr. Hetherington says it is an easy transition from the ideal of keeping fit for athletics to keeping fit for living.[1] I agree with all but the word "easy" — it does not come easily, but it is worth the effort. "Moral character," according to Kilpatrick, "is primarily an affair of shared social relationship, the disposition to determine one's conduct and attitude with reference to the welfare of the group."[2] Our games are full of shared social relationships, out of which the sturdiest traits of character may be built and so built that they will carry over.

We, as physical *educators*, are not justified in giving a larger and larger place to the play side until we make it truly educational. Where there is an indoor season with more emphasis on gymnastics, apparatus, and dancing, and an outdoor season of sports, the moment the sport season starts there is an unconscious but noticeable let down by both instructors and girls. If something happens to their class period we hear, "Oh, no matter, it's only baseball!"

Baseball should be worked out with as careful consideration to the technique of the game, to the building of neuromuscular responses, to the laws of learning, as are history or mathematics, so that the players and the teachers will know not only their objective but also the progressive steps to reach it. This will increase rather than diminish the interest, for a growing sense of mastery holds as just playing does not. Swimming has perhaps progressed the farthest along this line. Frost and Wardlaw have made splendid contributions to basket ball, baseball, and hockey.[3]

Some day a prophet will be born among us with a knowledge of anatomy, kinesiology, physics, pedagogy, psychology, physiology of exercise, who will do for games and sports what Doctor Skarstrom has done for gymnastics. Then, and then only, will these phases of activity be able to claim a really large place in an educational program.

These problems upon which we are all working are not distinctive of our field of work — we have them in common with all educators: (1) interest — vitalizing our work, having it grow out of the child's own needs; (2) consideration of individual differences — varying grades of ability, age, sex; (3) tests; (4) better and better pedagogy; (5) transfer. The more we can work along such scientific lines the more we will be recognized as educators in the largest sense of that word. This is all experimenting, trying, testing. We may be wrong and change tomorrow, but it shows we are growing.

Is it too much to hope that when our boys and girls go out from such a program they will have not only a splendid physique, good bearing, and vigorous health, but an ideal of these, a knowledge of how to keep them, and the technique and control for doing it; that they may have standards of fair play that will transfer into life and color their future relations with their kind; that they will have established the habit of daily exercise so that it is an urge,

[1] *School Program in Physical Education*, by C. W. Hetherington. World Book Co., 1922.
[2] "The Project Method," by W. H. Kilpatrick, *Teacher's College Record*, Vol. XIX, Sept. 1918, p. 319.
[3] *Basket Ball and Indoor Baseball*, by Frost and Wardlaw.

always with them, a life hunger; that they will have developed tastes for recreation, a wholesome hobby or two to help keep life sane; that they will have life and have it more abundantly, be joyous, whimsical, spontaneous, eager, — be imbued through life with the spirit of play?

THE SUPERVISOR AT WORK — IV[1]

C. J. ANDERSON and MAYBELL G. BUSH

Wisconsin State Department of Public Instruction, Madison, Wisconsin

It was the first school day of the second semester in a junior high school. Three classes in geography were beginning the study of Mexico and the Central American states. No assignment had been made on the previous day. On entering the first room the supervisor found the geography class reading silently the assignment for the next day. The instructor arose from his desk and informed the visitor that nothing was going on.

"You see," he said, "today is the beginning of a new semester, so the class has not prepared a lesson to recite. I have assigned them page 190 and to the last paragraph on page 191, and they are preparing it for tomorrow. That leaves me free this period to correct papers." The supervisor made no comment, as, obviously, a conference with this teacher was necessary. He excused himself to visit another geography class.

The second teacher had a clearer realization of her function. The supervisor found her conducting a class exercise. The same advanced assignment noted above had been given her pupils at the beginning of the recitation period. A list of the names of states, cities, mountains, and rivers was on the board before the class. The pupils were working with open books ascertaining the correct pronunciation of difficult names. Important geographical features were being located on a wall map. The teacher informed the supervisor that, since no assignment had been made on the previous day, she was conducting a supervised study exercise.

The third class was a much more interesting one. Clippings from newspapers containing items of interest concerning the countries to be studied had been mounted upon bristol board. A collection of products coming from these countries and offered for sale in the local shops had been secured and was displayed upon a table. A wall map of Mexico and Central America was studded with colored stars showing the cities where manufactured products of this community were being sold. All of this material had been collected by a geography class while studying this section of North America in the year preceding and was now being used to make a local contact with the sections to be studied.

[1] All rights reserved by the authors.

This teacher was reversing the traditional order of procedure. Instead of approaching the study of these countries through their location and physiographical features, she was creating a favorable mind-set by stressing our relations and contacts with them.

It is to be kept in mind that these three exercises took place in the same school building on the same day. The variety of attack indicates either lack of supervision or failure to capitalize the superior ability of the third teacher for demonstration purposes. The outstanding feature of her method was the use of commodity interchange in the establishment of a contact between the lives of her pupils and those living in these southern countries. The fathers and brothers of many of the pupils, no doubt, earned their livelihood in factories where these commodities were produced.

Not all teachers who use the problem method of teaching geography are acquainted with the pedagogy of problem solving. Supervisors, often, in their efforts to redirect teaching, assign problems to teachers to form the nucleus of uniform assignments, not realizing the value of an appeal to the pupils' "interests and experiences."

The following report of a geography lesson illustrates the problem method poorly adapted to its purpose because of a failure to appeal to these interests and experiences.

GEOGRAPHY — GRADE V-B

1. Kind of School: Small graded school in part of city occupied by miscellaneous laborers, mixed group of children.
2. Teacher: High school and normal school graduate with additional training in geography. Businesslike, very logical, able to make pupils feel their responsibility.
3. Learning Conditions: Morning period before recess. Light satisfactory, temperature comfortable, seats adjustable and suited to needs of pupils. Wall maps, well placed and accessible. Pupils coöperative and those at seats busily at work.
4. Class Activity: Recitation based upon the brief textbook work on Alaska.
5. Children: Fourteen in section, all normal and normal in age for the grade.
6. Previous Work and Day's Assignment: The past sixteen weeks had been given to the study of the United States basing the work largely on the physical features. Considerable attention had been paid to the processes involved in the various industries. The dependencies of the United States were being studied. The immediate lesson had been introduced by asking the children what they knew of Alaska. This determined, they were asked if they would like to learn more about it. To stimulate their study the following assignment was placed upon the board. Similar assignments had been used throughout the year.

   Problem:

   I. Why was Alaska called "Seward's Folly"?
      a. Who was Seward?
      b. What does folly mean (dictionary)?
      c. Size.
      d. Cost.
      e. Surface.
      f. Climate.

   II. Did it turn out as the people expected?
      a. Industries.
      b. Products.
      c. Most important.
      d. Their value.
7. Materials Used: Tarr and McMurry, Book I, pages 158–160; Allen's *Industrial Studies*, Ginn; Carpenter's *New Geographical Readers;* Keystone stereographs; encyclopedia; illustrated tourists' guides from all sources possible (at least six of these on teacher's desk).
8. The Lesson: The teacher pulled down the map near the class showing the entire continent of North America.

Teacher: Name the countries of North America. Go to the map and locate them. (Robert did this.)

Teacher: Which one have we studied very carefully? Frank.

Frank: The United States.

Teacher: Will you locate Alaska for us? George. (Complied indefinitely.) Will you locate Alaska again for us, Richard? (Complied.) All right. What did we call Alaska? Ruth.

Ruth: A territory.

Teacher: A territory. What might it become some day? Class.

Class: A state.

Teacher: If it becomes a state, what will happen to our flag? Myrtle.

Myrtle: We would have another star.

Teacher: Then how many will we have? (Class answered: 49.) We have a problem on the board this morning. Why was Alaska called "Seward's Folly"? Who was Seward? And what did he do? (Looked around class and waited a moment till several hands were raised.) Arline.

Arline: Seward was a Secretary of State in Lincoln's cabinet. He urged the purchase of Alaska.

Teacher: To whom did this land belong? Carol.

Carol: Russia.

Teacher: Where is Russia?

George: Europe.

Teacher: Seward finally persuaded the United States to buy it. How much did they pay for it? Tom.

Tom: $7,200,000.

Teacher: Why did they call it "Seward's Folly"? Why was it foolishness to buy this? Dorothy.

Dorothy: It was all mountains and rough.

Teacher: What would you call the mountains and the roughness of the land?

Dorothy: The surface.

Teacher: Tell us more about the surface of the land, Margaret.

Margaret: In some places there were a lot of mountains and in other places it was level.

Teacher: What mountain ranges reach into Alaska? Robert.

Robert: Rocky Mountains.

Teacher: Please locate the Rocky Mountain system — the position on the map. (Richard did this quickly.) All right. Are there any important peaks in Alaska? Richard.

Richard: Mt. McKinley.

Teacher: Can you locate it? (Richard, who sat near the map, could not see the name.) Just about where is it? Don't look for the name. Another one. Ruth.

Ruth: Mt. St. Elias.

Teacher: Now locate it. Just about where? Don't look for the names, ever, on the map. (Ruth pointed approximately to the right place.) Alaska has many volcanoes and much beautiful scenery and I am going to let some one find out about a great discovery. There are three pamphlets on my desk that tell about this. George, Margaret, and Catherine may read about the pictures in the three books. They are very interesting. (These were cuttings from the *National Geographic Magazine* regarding volcanoes, hot springs, etc.) What great river flows through Alaska? Locate it on the map.

Tom: Yukon River. (Pointed correctly.)

Teacher: We'll come back to that and find out why it is so important. Is there any farming in Alaska? Cameron.

Cameron: It's too cold for farming.

Teacher: Tell us something about the climate in Alaska. Dorothy.

Dorothy: It was cold in the winter in the mountains, but in the summer it was warmer than we would think it would be.

Richard (volunteering): In most places in the northern part (pointing) there are Eskimos. Down here (pointing) there is some farming.

Teacher: In what zone is Alaska located? George.

George: In Frigid and North Temperate Zones.

Teacher: If it is in two zones, what circle crosses it? Carol.

Carol: Arctic. (Located it when asked to do so.)

Teacher: Locate the North Frigid Zone. (Done correctly.) About how much of Alaska would you say is in the North Frigid Zone?

Vernon: About one-third.

Teacher: About one-third. Now we have the

reasons why it was called "Seward's Folly." Now, we didn't take what one? What was it we forgot to talk about? (Class looked at the outline on the board and said: "Size.") How large is Alaska? Margaret.

Margaret: About one-fifth the size of the United States.

Teacher: Did the United States need all of this land when they bought it? Arline.

Arline: There was very much land in the United States at that time. They didn't need this land.

Teacher: They didn't need this land. Now we've taken up the surface, climate, cost, and size. Did it turn out as people expected it would — a big folly, a useless piece of possession? (Called attention to outline.) George.

George: It did not.

Teacher: Tell us some things that proved it was not a folly.

George: The fishing.

Teacher: Tell us about the fishing in Alaska.

George: It was the most important thing. Every year thousands of salmon come up there. They just have to take them out of the water.

Teacher: Tell us about the salmon fish. Does anyone know about its size? Who'll take "salmon fish" for Monday? (After waiting to see that there was no response.) George, you may take it. Where will you look for that? (George answered: "In a library book.") How will you know where to look for it after you get the book? (Some one answered: "He might look for Alaska.") He might look for Alaska. (Another child answered: "Look for salmon.") Look for salmon and for the exact pages to read. Find out how important salmon are in value. What about the fish? How valuable are they? (No response.) Let us look in our books and find out. (Pupils open their books and read quickly.) Close books. Arline.

Arline: We get every year out of the salmon as much as Alaska cost us.

Teacher: I have here some pictures that may be used for reports. Who would like them? (Given to Tom, Dorothy, and Vernon. These were three Keystone stereographs dealing with salmon.) There is another thing very valuable in Alaska. Tom.

Tom: Seals.

Teacher: Tell us about seals.

Tom: Some of the seals are used for sealskin coats, which cost several hundreds of dollars. We have had seven times as much money from seals as we paid for Alaska.

Teacher: Another industry that will prove more important? Tell us about it.

Arline: Gold mines. The men came up to work the mines and it became more important than the fish.

Teacher: What big gold mine near Alaska do you know? Richard.

Richard: Klondike. In the northeastern part.

Teacher: Locate it on the map. (Richard failed, but George corrected it.) What river was used as a trail in reaching the gold mines? (Class answered: "The Yukon.") Now we have two reasons why the Yukon was important, first, for the salmon fish, and second, to reach the gold fields. Why haven't they railroads in Alaska to carry gold here and there? Margaret.

Margaret: On account of the mountains.

Teacher: What other industry have they? (Class answered: "Farming.") Locate farming regions on the map. (Pupil pointed to southwestern part.) Now we find something growing that may turn out to be of great value to the United States in future years. (Class answered: "Lumbering.") Who will take gold as a report for Monday? Let's have two boys on that because it is so hard. (Richard and Robert volunteered and were given Allen's *Industrial Studies of North America* as a reference and told to look in other places also.) Now, class, would you say that Seward committed a great folly in persuading the United States to buy Alaska? How many think he did? (No hands raised.) Is there anyone in the class who has not a report now? (Six hands raised.) Arline, you may take the capital of Alaska. Myrtle, you may take the important city of Fairbanks; and Frank, you may take Sitka. Ruth, Carol, and Cameron may each take one of these stereographs (handing them appropriate material on Alaska). Everyone has

his lesson for Monday now. Does everyone know where he is going to look for his topic? What book are you going to use, Frank?

Frank: One of the books on the window sill.

Teacher: If you can't find it there, where?

Frank: Encyclopedia.

Teacher: You can always find it there. All ready, books closed. Ready for recess.

9. Comments: This lesson occupied twenty minutes. It moved rapidly, though the teacher gave pupils opportunity to volunteer after each question before she called upon an individual. The children were comfortably alert and conscious of the forward movement of the lesson, feeling that something worth while was happening.

This exercise was submitted to a number of supervisors for analysis, evaluation, and constructive suggestions.[1] Their evaluations are given below.

1. The purpose of the teacher was inadequate.

2. The problem did not touch the pupils at any point.

3. There was no desire on the part of pupils to continue because of a felt need.

4. Pupils were getting facts, not power.

5. The organization of materials was that of the teacher, not of the pupils. The teacher was too conspicuous, and held center of stage.

6. The teacher formulated all the questions and stated all the conclusions. The pupils did not have sufficient opportunity for participation nor for exercise of initiative.

7. The lesson developed into a question and answer type — the teacher "pumping" for everything she got.

8. There was no motivation. Too many facts and too little development.

9. Many questions were poorly framed — leading and suggestive of answers.

10. The order of procedure was not logical.

11. The lesson lacked thoroughness.

12. The teacher showed skill in directing pupils to definite sources of information.

13. The teacher illustrated very well the need for supplementing the author's contribution.

14. There was some evaluating done by pupils.

15. A definite assignment was made.

HOW SUPERVISORS WOULD HELP THIS TEACHER

One supervisor says: "I would call attention to the necessity for providing situations to draw forth questions from the children — to provide discussion *for free expression of thought.* I would suggest that she be more careful of her English."

Both of these suggestions relate to an English problem. The geography problem is overlooked.

Another suggests as follows: "Why not lead the pupils to ask the questions and organize the facts? Would not the lesson mean more to the class if Alaska were compared with the other dependencies of the United States?"

This one has likewise failed to rise to her opportunity. She is judging in terms of a mechanical measure. She sees the problem lesson as one in which the teacher lays aside her responsibility and places the task of "asking questions" in the hands of the pupils.

Still another supervisor believes that the "high light" of a problem lesson comes when the pupil becomes teacher. He says:

I should first commend the interest and spirit of the class, the fact that the aim was clearly set up, and the lesson went along effectively to the realization of the aim. I should ask her if she did not generally prefer a single main question or problem for the lesson. I should say that her problem as selected seemed to work very well. I should tell her that she asked some good questions. I should then ask her if she had the children ask questions sometimes and what value she attached to pupils' questions. I should ask her if she sometimes lets the *pupils* choose what topics they would like to look up and if she sometimes lets the *pupils* discover what topics should be looked up. I should ask her what she thought of

[1] See outline for "Analysis and Evaluation of Recitation" in JOURNAL OF EDUCATIONAL METHOD, Vol. III, No. 4, p. 139.

this method — instead of *her* asking the next question at some point, for her to say instead, "What is the next question we should ask?" letting the pupils find this question as well as the answer. I would suggest that this could be done occasionally. Gradually the pupils might ask more and the teacher fewer questions. The pupils could be led to discuss the topics with each other, asking questions of each other part of the time. I should close by telling her it was an excellent lesson.

The next supervisor attacks the same problem with a different vocabulary. He says:

I would suggest the following:

1. A careful study of the socialized recitation.
2. The possibility of developing leadership through pupil participation in organized classes or groups.
3. The value of thought-provoking questions.
4. A visit to a school in which the socialized recitation and the *project* method have been highly developed.

The following suggestions from one supervisor are much more constructive and illuminating. She is sensing some of the real problems involved. She comments as follows:

1. Teacher needs to discover children's capacity to carry a heavy load eagerly, and *give* abundantly, under proper stimulus.
2. Teacher needs assistance in discovering problems that really touch the lives of the children and have fruitful issue.
3. Teacher needs to organize her material in such units that she will cease to pester the class with detailed questions on which they learn to depend.
4. The children need to be given skill in assembling and organizing material related to a topic, and further skill in presenting the complete unit to the class.

Organization of the material in terms of industries known to the pupils is suggested by another in the following statement:

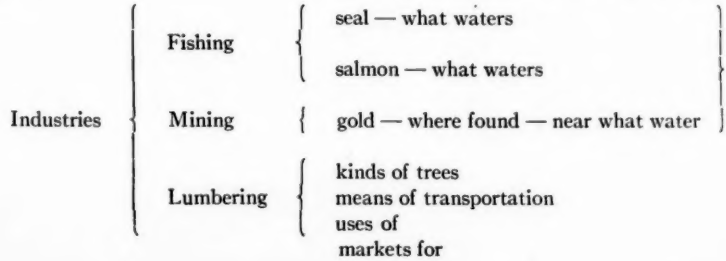
Your class seemed to be interested in the lesson and were certainly well behaved. Since you had studied much about industries in the United States, would it not have been a good plan to have attacked the new topic from that angle? Since you are quite well supplied with material, do you think the children could have used more of it than they did? We all learn to do by doing. These children are so anxious to please you, let them feel that they are of real assistance. They need to gain power more than information. The lesson was a question and answer type and was really a test for information. Use thought questions as often as you can.

You and your class might have worked out some such an outline as this (see below).

Thus you would have started on familiar ground and, constantly relating the new knowledge, you could finally have it so tied up with their former knowledge that it would mean much more to them and they would be more likely to remember it.

You have a good opportunity for a socialized recitation Monday. I am glad to see you plan for it.

The organization of the data around topics or questions in the minds of pupils is suggested by one supervisor. She indicates a way of starting the



activity in the minds of the children as follows:

I am indeed glad to see that you are providing well-worked-out central thoughts for the pupils to study toward. Your outline fitted the text *very well.* I was in hopes you would sit or stand at the side of the class and begin something like this:

"Who can think of some of the things we ought to talk about before we discuss this first question on the board — something about Alaska *not* suggested by this outline?" This would start your class at once thinking beyond the text; it would require them to organize data around a topic or question in their *own needs,* and stimulate them to have independence enough to rise and state their *own* results of thinking (a *most valuable* activity to develop in our classes).

One or two supplementary questions on your part would clear the way for the discussion, but the activity would have started in the children's minds; statements not valuable could have been culled out (thus giving them practice in judging values). Also many features of the work that are hazy in their minds are brought to light when they are required to *use* their information. Then your lesson could have continued by having the topics discussed from the board, but not from *your* questions, and you could have done that very skillful piece of work you did in introducing the references for the following day. I am going to tell you that for every word a pupil uttered you spoke at least one and one-half times as many. For your type of lesson, what would you say about this?

May I suggest a few things you can do to overcome this?

1. Plan beforehand how you are going to start every lesson to shift the talking to the pupils. You can safeguard in advance at least the first five minutes of each recitation lesson.

2. Stand at the side and nod (without speaking) to pupils who look as if they could go on.

3. Make out in advance the questions you expect to need. See how few you can formulate that will cover the lesson material outside of that provided for in your written assignment which the pupils have.

4. Learn to sit in the back of the room occasionally and be one of the group — a learner with them. See how much they can do without you.

5. Read Branom, *The Teaching of Geography.*

The criticisms and suggestions of the supervisors center around the following points:

1. Pupils should ask the questions and organize the facts.
2. Pupils should often choose the topics to be looked up and discussed.
3. Socialization of the recitation.
4. Thought-provoking questions.
5. Ratio of pupil activity to teacher activity.

In reality this lesson, instead of being a problem, is largely "memory work with an improved organization of subject matter." The selection and organization of the materials is the teacher's, not the pupils'.

At the time when this lesson was presented, reindeer meat from Alaska was being advertised and sold in certain meat markets of the city. The papers were full of statements concerning President Harding's trip to Alaska. His means of transportation, the places he visited, the industries he investigated, even the kinds of food he ate were made familiar to every American reader of the newspapers. Here are presented two points of departure for a real problem. Such information would make it possible to relate the problem to be studied to the lives and experiences of the pupils if not to their interests.

THE CONCEPT OF THE PRINCIPALSHIP — II [1]

JAMES F. HOSIC
Associate Professor of Education, Teachers College, Columbia University

Part I of the Twelfth Yearbook of the National Society for the Study of Education was devoted to a discussion of "Some General Principles of Management Applied to the Problems of City-School Systems." It is interesting to recall that the cover title of that monograph is *The Supervision of City Schools* and to note that the writer, Professor Bobbitt, of the University of Chicago, seized upon the newly popular term "scientific management," current in discussions of industrial efficiency, and sought to capitalize the principles associated with it as suggestive to educators. He declared that supervision, management, and direction are essentially synonymous terms and seems to believe that the domination of the activities of the workers in a steel mill by a foreman or boss is an ideal that can and should be realized in a public school or school systems. This notion appears, however, not to have taken hold. The article is now seldom referred to.

The fact is, of course, that the analogy is largely false. Teaching cannot be "directed" in the same way as bricklaying. In education the supervisor's function is not to devise all plans and work out all standards and merely inform his coworkers as to what they are. He should not so much give orders as hold conferences. His prototype is not a captain, lieutenant, or officer of the guard in industry, but chairman of committee or consulting expert.

In his report on the New York City Survey, published as *Elementary School Standards*, Professor McMurry prefers to regard the supervisor as an adviser, educational leader, and teacher of teachers. He thinks the principal's relations to his subordinates should be in many ways similar to their relations to their pupils and that he and they should be judged by the same standards, namely, provision for motive, for consideration of relative values, for organization of results, and for taking the initiative. In his view the principal should be a good teacher — of teachers!

During the ten years since this second report appeared, great progress has been made in developing the concept of the principalship. The primacy of the function of supervision in that office is now generally conceded. Conditions, however, have not yet so improved as to make this ideal entirely possible. In the second place, there are as yet no generally recognized standards by which supervisory work is judged. Comparatively few principals, moreover, have as yet anything other than teaching experience and perhaps a limited apprenticeship as assistant to a principal by way of specific preparation for this office. Even in large cities, in which special examinations are prescribed for candidates for the principalship, papers are seldom set in this specific field. Examiners content themselves with asking questions on education and method in general and do not

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touch on how to improve the teaching in a particular school.

Possibly a concerted movement to emphasize the notion of *improvement of teaching* rather than the concept of supervision would help. Certainly the latter needs constant reinterpretation and enrichment to save it from becoming merely a conventional name for looking about — over — now and then. Mr. Burton sought to avoid the difficulty by employing both expressions, *Supervision and the Improvement of Teaching*.[1] This is better certainly than the policy of *laissez faire* boldly proclaimed by one war-scarred veteran, who boomed out in a meeting of principals in which supervision was under discussion, "I get good teachers and leave them entirely alone."

The concept of improvement has distinct advantages. It points the way to an eclectic and many-sided practice, whereas supervision may easily be taken to mean some one or two procedures only to be followed in aiding teachers, as, for example, visiting and criticizing individuals. Improvement suggests a wide range of possibilities. Under this head may readily come general orientation, interpreting courses of study, revising the marking system, trying out new forms of reports to parents, evaluating textbooks, giving tests, and so on.

The phrase also names directly the ultimate end in view. This commends it to those who are accustomed to think of supervision as merely surveillance or even espionage. It is one thing for teachers to regard the principal as simply one placed over them in authority, to look on while they work. It is quite another for them to realize that he is an active fellow worker, coördinating their efforts, helping to define and solve their problems, ready to lead, not merely to direct. Most of the complaints which teachers have made with regard to their supervisors are reducible finally to the charge that the supervisor lacks an efficient plan of helping but remains outside of the picture. The facts presented in Morrison's study are probably typical.[2]

Still further, the word improvement implies that the principal has standards by which to judge present conditions and build ideals for the future. Supervision too easily permits of evading the issue. Let the supervisor but step about, keep the social machine running smoothly and everybody feeling well, and too often he will get credit for ability far beyond his deserts. School tradition, like any other sort, is exceedingly tenacious, and once a body of fairly good practices is established, they tend to perpetuate themselves without special attention from anybody. Hence many supervisors make a very good showing merely by maintaining the *status quo*. Schools, like individuals, however, never in fact actually stand still. The school that is not going forward is slipping back. A positive program of improvement is the only preventive of this.

The competent principal will have such a program. He will learn by systematic use of all modern devices just what the conditions within and

[1] Appleton & Co., 1922.

[2] See this JOURNAL for December, 1921, Vol. I, pp. 131–138.

about his school are. He will call upon his teachers to help him decide what forward steps are most needed and most feasible. He will canvass the possible means of improvement, and utilize as many of these as possible, being careful to avoid overwhelming his colleagues with the multiplicity of items he brings to their attention or the range of effort he calls upon them to exert.

Among various possibilities orientation will often take first place. Clear purposes and definite knowledge of the difficulties to be overçome are half the battle. Too much is now taken for granted in these respects. Teachers are more likely than not to have studied the subjects of instruction from an academic rather than from a professional point of view. Their origin in human need has been but faintly realized, and hence the part they may play in helping the pupils to a fuller life here and now is obscure. Thus geography is but little more than a conventional knowledge of facts, arithmetic is merely a set of processes with numbers, reading unhesitatingly correct pronunciation of common words, and the like. There is not yet anything approaching a widespread apprehension of what abilities are actually involved in the so-called subjects of study when they are really functioning in life activities. Hence instruction in them remains largely formal. Nothing short of an applied psychology of subjects will rectify this fault. Both courses of study and schoolroom method need overhauling in the light of it.

Here is one great opportunity for the trained and scholarly principal. It is his to raise the problem; his to help his colleagues see the need and the possibility of supplying it; and his by means of first-hand observations, a good professional library in the school, modern courses of study, round table discussions, the application of tests, and occasional appeal to experts from the outside to lead his group to substitute scientific knowledge for unanalyzed tradition.

This means that a principal must be an educator, not merely a manager. Twenty years of successful classroom work will not necessarily fit him for this new task. He can never expect that teacher-training institutions will be able to send him graduates who are fully oriented. When one is twenty, he — or she — is twenty! What would you have? Our young girls are clever, our textbooks superb, and yet there is no substitute for maturity of experience and ripeness of scholarship. Hence, I say, the leading function of the principalship is the improvement of teaching.

A RESTATEMENT OF IMPORTANT EDUCATIONAL CONCEPTIONS OF DEWEY IN THE TERMINOLOGY OF THORNDIKE[1]

LAURA MERRILL CHASSELL and CLARA FRANCES CHASSELL
Ohio State University *Teachers College, Columbia University*

Many a student has been mystified by the terminology of an author who would find the ideas which are expressed far less difficult to understand if they were stated in language of his own. It is not strange, therefore, that time has honored the method of study which involves restatement by the student in his own words of the ideas of the author studied. Restatement of this kind, however, is not the only type possible for study purposes, and another form may be even more effective, namely, the re-expression of the ideas of an author in the terminology of a second author. Through this procedure the student not only acquaints himself with the conceptions and the vocabulary of two authors rather than of one, but also, if the terminology of each is difficult, undergoes as much mental discipline as translation from one foreign language into another could provide.[2]

The latter is the type of restatement employed in the present article. Certain important educational conceptions of Dewey have been restated in the terminology of Thorndike.[3] In the restatement no effort has been made to use language more readily comprehensible to the average student than the original. Such an effort would have been inappropriate, for the terminology of the latter author is probably fully as difficult as that of the former; each, though in his own dialect, speaks the technical language of the modern science of education. Rather, an attempt has been made to express the conceptions in terms having a physiological reference. It is believed that expression in such terms, which automatically results from the use of the Thorndike terminology, is important, for in and through a physiological mechanism the educative process must proceed. The teacher who takes his theory and reshapes it into terminology of this character may hope to find himself one or more rounds further advanced on the ladder of scientific educational practice.

The conceptions which have been restated were presented in Dewey's *Democracy and Education* and in his *Interest and Effort in Education*. They were selected because of their importance and representative character. Some were found expressed in statements which permitted of almost verbatim translation; others were culled from more or less extensive portions of the text.

[1] This article is a revision and extension of an earlier paper under similar title prepared by Laura M. Chassell, who received the suggestion for the theme from Professor William H. Kilpatrick, Teachers College, Columbia University.

[2] Moreover, he has at command the means of examining conveniently the ideas of the two authors on similar subjects. By translating the ideas of the one into the terminology of the other he may sweep away the barrier of a different speech, and then compare the resulting translation with corresponding content in the latter's writings.

[3] As found in his *Educational Psychology*, Volumes I to III, his *Elements of Psychology*, and his *Principles of Teaching*.

In the pages which follow, the original wordings and the restatements are given in parallel columns. In order to make comparison of the two columns easily possible, the quotations have been arranged in paragraphs corresponding to the paragraphing of the restatements.[1] The page numbers for each quotation are indicated in parentheses immediately following the quotation.[2] In comparing the parallel columns the reader should not fail to bear in mind that although the terminology in the second column is that of Professor Thorndike, the restatement using this terminology was made by the writers, and represents their interpretation of Professor Dewey's conceptions.

I. SOCIAL NEED FOR EDUCATION AND ITS FUNCTION

A. Necessity for Education

The primary ineluctable facts of the birth and death of each one of the constituent members in a social group determine the necessity of education. On the one hand, there is the contrast between the immaturity of the new-born members of the group — its future sole representatives — and the maturity of the adult members who possess the knowledge and customs of the group. On the other hand, there is the necessity that these immature members be not merely physically preserved in adequate numbers, but that they be initiated into the interests, purposes, information, skill, and practices of the mature members. . . . The achievements of adults are far beyond what the immature members would be capable of if left to themselves. . . . Deliberate effort and the taking of thoughtful pains are required. . . . Education, and education alone, spans the gap. (I, p. 3.)

From the fact that man is subject to the laws of birth and death arises the need of education. On the one hand, there is the contrast between the archaic original equipment of the human infant, adapting him for the life that might be led by a family group of wild men in the woods, and the changed human nature of the adult, adapted to the life that now is, as a result of human art, habit, and reasoning. On the other hand, there is the necessity that the young members of the species be not merely kept from elimination in sufficient numbers, but that in them be produced the interests, ideals, information, powers, and habits of the adult. The unguided course of inner growth will not result in the formation of these bonds. Man himself must be changed: some original tendencies must be cherished, some be redirected or modified, and others be eliminated outright. Education changes human nature from what it is into what it ought to be.

B. Function of Formal Education

As a society becomes more complex, . . . it is found necessary to provide a special social environment which shall especially look after nurturing the capacities of the immature. Three of the more important functions of this special environment are: simplifying and ordering the factors of the disposition it is wished to develop; purifying and idealizing the existing social customs; creating a wider and better balanced environment than that by which the young would

As the stimuli afforded by the environment and the responses demanded become increasingly complex, society delegates the control of these to formal education. To the school, then, falls as its task the modification of the original tendencies of the human infant. Three of its more important functions are simplifying and arranging situations in such a way as to lead to the formation of the desired habits of intellect, character, and skill; improving the nature of human wants; pro-

[1] All italicizing except that of single words or phrases has been omitted.

[2] In these references the number one (I) refers to Dewey's *Democracy and Education* (Copyright, 1916, by the Macmillan Company), and the number two (II) to Dewey's *Interest and Effort in Education* (Copyright, 1913, by the author, to whom we are indebted for permission to publish the excerpts needed).

be likely, if left to themselves, to be influenced. (I, p. 27.)

viding a larger number of stimuli and stimuli more varied in character than those to which man would be likely, if left to himself, to have opportunity to respond.

C. Nature of Social Control

This control [social] is not the same thing as physical compulsion. . . . The basic control resides in the nature of the situations in which the young take part. In social situations the young have to refer their way of acting to what others are doing and make it fit in. (I, p. 47.)

Social control is more than the mere compulsory forcing of responses; it involves the control of responses by the control of stimuli. These should be of such a nature as to compel consideration on the part of the individual of the responses of others and adjustment to these.

D. Implications of Education

1. Education in Terms of Growth

Power to grow depends upon need for others and plasticity. . . . The former [habituation] furnishes the background of growth. . . . Education is all one with growing; it has no end beyond itself. The criterion of the value of school education is the extent in which it creates a desire for continued growth and supplies means for making the desire effective in fact. (I, p. 62.)

Capacity for permanent modifiability depends upon protection of the individual while the first of the needed connections are being formed, and upon his capacity to make new connections. The bonds already present serve as a basis for the addition of the new. Education is all one with the forming of connections; it has no end beyond itself. The value of school education may be measured by the extent to which it creates a want for the forming of new connections and supplies a means for satisfying this want.

2. Conception of Education in Harmony with the Ideal of Growth

Education . . . is that reconstruction or reorganization of experience which adds to the meaning of experience, and which increases ability to direct the course of subsequent experience. (I, pp. 89–90.)

Education is that changing of the original nature and learned tendencies of an individual which results in his gaining added appreciations of the significance and cause of the changes in his nature, and increased ability to control them.

The conception that the result of the educative process is capacity for further education stands in contrast with some other ideas which have profoundedly influenced practice. The first contrasting conception considered is that of preparing or getting ready for some future duty or privilege. . . . This aim diverts attention . . . from . . . taking advantage of the needs and possibilities of the immediate present. . . . The notion that education is an unfolding from within . . . involves ignoring the interaction of present organic tendencies with the present environment. . . . Another influential but defective theory is that which conceives that mind has, at birth, certain mental faculties or powers, . . . and that education is the training of these faculties through repeated exercise. This theory treats subject matter as

The view that the outcome of education is capacity for further education is in contrast with some other theories which have had a large influence upon practice. The first is the theory that education should prepare children for adult life and work. This aim distracts attention from taking advantage of the needs which the children can then and there appreciate and the capacities that have matured. The second is the theory that education is the permitting of the inner forces of development to do their perfect work. This notion ignores the fact that the environment of childhood changes the nature of the child and is changed by it. The third — a theory which has had many adherents despite its shortcomings — is that the mind is a collection of faculties or powers given to man as his birthright, and that

comparatively external and indifferent, its value residing simply in the fact that it may occasion exercise of the general powers. (I, pp. 79–80.)

education is the strengthening of these faculties through repeated exercise. According to this view, subject matter is not thought of primarily as composed of specific stimuli which arouse definite responses and as possessing value on the basis of its adequacy from this standpoint, but is conceived to have value simply because it may provide for the exercise of the faculties.

The idea of education as continuous reconstruction . . . identifies the end . . . and the process. (I, p. 91.)

Since the aim of teaching is the production of desirable and the prevention of undesirable changes in human beings by producing and preventing certain responses, it follows that the aim and the method are intimately related.

We are doubtless far from realizing the potential efficacy of education as a constructive agency of improving society, from realizing that it represents not only a development of children and youth but also of the future society of which they will be the constituents. (I, p. 92.)

The changes produced not only modify the nature of the individual, but also may result in responses which will increase the welfare of the group of which the individual is a member.

II. NATURE OF EDUCATION DEMANDED BY A DEMOCRATIC SOCIAL GROUP

A. Criteria of the Worth of Social Groups

The two points selected by which to measure the worth of a form of social life are the extent in which the interests of a group are shared by all its members, and the fullness and freedom with which it interacts with other groups. (I, p. 115.)

The worth of a social group may be judged by the extent to which the wants and satisfactions of the group are shared by all its members, and by the fullness and freedom with which it coöperates with other groups.

B. Nature of a Democratic Society: Its Demands upon Education

A society which makes provision for participation in its good of all its members on equal terms . . . is in so far democratic. Such a society must have a type of education which gives individuals a personal interest in social relationships and control, and the habits of mind which secure social changes without introducing disorder. (I, p. 115.)

A group which provides equal opportunity to all its members for improving the character of their wants and satisfying them is in so far democratic. Education in such a group must modify the original tendencies to respond to the behavior of other human beings into habits desirable from the standpoint of the common good, and develop the attitude of mind which will find the functioning of these habits satisfying; it must also encourage the formation of such attitudes as will produce social changes gradually.

In the degree in which society has become democratic, social organization means utilization of the specific and variable qualities of individuals. . . . School facilities must be secured of such amplitude and efficiency as will . . . secure to all the wards of the nation equality of equipment for their future careers. (I, pp. 105, 114.)

In proportion as society has become democratic, it makes provision for the recognition of individual differences in original nature. Such abundance and variety of stimuli must be provided, and the schools must be managed with such expertness, as to afford equal opportunity to all children to prepare for their adult life and work.

III. IMPLICATIONS OF THINKING, METHOD, AND SUBJECT MATTER

A. Thinking

Thinking . . . is the intentional endeavor to discover *specific* connections between something which we do and the consequences which result. . . . It makes it possible to act with an end in view. (I, pp. 170–171.)

Thinking is present when the individual analyzes the relation between the response and the effect produced. Thereby it is possible to direct future behavior to secure desired results.

They [the essentials of reflection] are first that the pupil have a genuine situation of experience — that there be a continuous activity in which he is interested for its own sake; secondly, that a genuine problem develop within this situation as a stimulus to thought; third, that he possess the information and make the observations needed to deal with it; fourth, that suggested solutions occur to him which he shall be responsible for developing in an orderly way; fifth, that he have opportunity and occasion to test his ideas by application, to make their meaning clear and to discover for himself their validity. (I, p. 192.)

The essentials for the operation of the powers of analysis and selective thinking are, first, that the individual be confronted by a situation of the kind which would be met with in real life and which involves a response recognized as potentially satisfying; second, that certain elements in the situation demanding response be prepotent; third, that he have the facts to reason with and that he examine each fact in the light of the problem in hand; fourth, that he make varied response to this annoying state of affairs until a satisfying condition is attained; and fifth, that he have opportunity to test the response selected to see if it is satisfying in relation to the stimulus, and to discover the reasons for this satisfaction.

B. Method

Method means that arrangement *of* subject matter which makes it most effective in use. (I, p. 194.)

Method is that control of stimuli which most effectively calls forth the desired response.

C. Subject Matter

The educator's part in the enterprise of education is to furnish the environment which stimulates responses and directs the learner's course . . . so that response will as surely as is possible result in the formation of desirable intellectual and emotional dispositions. Obviously studies or the subject matter of the curriculum have intimately to do with this business of supplying an environment. . . . All information and systematized scientific subject matter . . . have been transmitted by social means. (I, pp. 212, 225.)

The subject matter of education is the stimuli selected by society as suited to call forth the most desirable responses of thought, feeling, action, and attitude on the part of the individual, and to control their sequence. Studies are important organizations of such related stimuli.

As the social group grows more complex . . . it often appears . . . as if subject matter existed simply as knowledge on its own independent behoof, and as if study were the mere act of mastering it for its own sake, irrespective of any social values. (I, p. 213.)

As society becomes more complex there is a tendency for these stimuli to be thought of as having value merely from the standpoint of their function in arousing responses of thought irrespective of their function in arousing responses of action.

Especially is the educator exposed to the temptation to conceive his task in terms of the pupil's ability to appropriate and reproduce the subject matter in set statements, irrespective of its organization into his activities as a developing social member. The positive principle is maintained when the young begin with active occupations having a social origin and use, and proceed to a scientific insight in the materials and laws involved, through assimilating into their more direct experience the ideas and facts communicated by others who have had a larger experience. (I, p. 227.)

There is danger that the pupil make those responses to stimuli of this character which are satisfying to the teacher regardless of their producing desirable changes in his own nature. He should, however, through responding to situations having their origin and use in the life of the race, come progressively to appreciate their significance through knowledge supplied by others who have responded to a larger number of situations.

IV. CONFLICTS IN EDUCATIONAL THEORY AND PRACTICE

A. The Opposition of Interest and Effort: A Type

1. The Relation Between Interest and Effort

Genuine interest is the accompaniment of the identification, through action, of the self with some object or idea, because of the necessity of that object or idea for the maintenance of a self-initiated activity. Effort, in the sense in which it may be opposed to interest, implies a separation between the self and the fact to be mastered or task to be performed, and sets up an habitual division of activities. Externally, we have mechanical habits with no mental end or value. Internally, we have random energy or mind-wandering. . . . Interest, in the sense in which it is opposed to effort, means simply an excitation of the sense organ to give pleasure, resulting in strain on one side and listlessness on the other. (II, p. 14.)

Genuine interest is the accompaniment of the voluntary making of a response or of a series of responses to a situation which is conceived of as possessing something of value for satisfying the wants of the individual. In the sense in which effort may be opposed to interest, it implies that there is no intrinsic satisfyingness in making response to the situations to which response is demanded: the work does not interest in and of itself but only by its consequences or connections. Under such circumstances there are, externally, habitual responses made irrespective of their significance; and, internally, a succession of apparently random ideas. Interest, in the sense in which it is opposed to effort, means simply a sensory stimulation for the purpose of giving pleasure, having as evil effects, if continued, over-stimulation and over-response on the one hand, and passivity of response on the other.

When we recognize there are certain powers within the child urgent for development, needing to be acted out in order to secure their own efficiency and discipline, we have a firm basis upon which to build. Effort arises normally in the attempt to give full operation, and thus growth and completion, to these powers. Adequately to act upon these impulses involves seriousness, absorption, definiteness of purpose; it results in formation of steadiness and persistent habit in the service of worthy ends. But this effort never degenerates into drudgery, or mere strain of dead lift, because interest abides — the self is con-

A psychological basis is afforded for pedagogy when it is realized that there are certain capacities within the child which need to be exercised, lest the connections weaken from disuse or fail to be desirably modified. Effort arises normally in the attempt to bring the connections to the final degree of strength through large contributions from training. The making of adequate responses involves the strengthening of the set to respond with zeal and to extract the utmost of value from the particular situation; it results in the formation of an attitude of controlling responses with reference to the satisfying of the

cerned throughout. Our first conclusion is that interest means a unified activity. (II, pp. 14–15.)

higher wants of the individual and in an organization of response-bonds to this end. Effort of this nature never degenerates into the habitual forcing into conduction of units unready to conduct because the satisfyingness attendant upon the entire behavior-series, in that a want of the individual is being satisfied, is transferred to its elements. Interest, then, means a sequence of responses satisfying in character.

2. Interests as Ends and as Means

Interest is normal and reliance upon it educationally legitimate in the degree in which the activity in question involves growth or development. Interest is illegitimately used in the degree in which it is either a symptom or a cause of arrested development in an activity. (II, pp. 41–42.)

Interest is normal and reliance upon it educationally legitimate in the degree in which the series of responses in question involves the strengthening of connections of the higher type, — i.e., of those that are part of a behavior-series of considerable extent and importance, — and the increasing of the satisfyingness of connections of that type. Interest is illegitimately used in the degree in which it is a symptom that conduction units are ready to conduct in reference to isolated and unimportant situations, or the cause of such readiness.

A child who is simply building with blocks has an activity of very short time span; his end is *just* ahead of what he is doing at the moment. . . . With trained adults an end in the distant future, a result to be reached only after a term of years, may stimulate and regulate a long series of difficult intervening steps which, in isolation from the thought of the end, would be matters of total indifference, or even repellent. (II, pp. 36–38.)

The difference between the interest of the child and that of the adult is that the responses of the former are accompanied or almost immediately followed by satisfaction, whereas those of the latter, though possibly in themselves not satisfying or even annoying, may be parts of a long-continued behavior-series which as a unit is followed by satisfaction because of its consequences or connections, and which has served to call forth these responses and to control their sequence.

An interest is primarily a form of self-expressive activity. . . . There are cases where action is direct and immediate. . . . On the other hand, we have cases of indirect, transferred, or technically speaking, mediated interest. . . . The more elaborate the action, the longer the time required by the activity; the longer the time, the more the consummating or fulfilling stage is postponed; and the longer the postponement, the greater the opportunity for the interest in the end to come into conflict with interest in intervening steps. (II, pp. 21–22; 44–45.)

In the first case the interest may be said to be immediate or intrinsic; in the latter, derived. The longer and the more complex the behavior-series, the greater the time required for its operation and the more remote the satisfying state of affairs which is to follow, the greater the remoteness, the greater the danger that the annoyance of the individual responses rather than the satisfyingness of the consequences or connections of the series will become over-potent, and drudgery will ensue.

3. Analysis of Effort: Application to Subject Matter

What is it that we really prize under the name of effort? . . . What we are after is . . . endurance against obstacles and through hin-

The type of effort which is really desirable signifies that the state of affairs following a behavior-series is sufficiently satisfying to call forth

drances. . . . Willingness to put forth energy at any point of the entire activity, measures the hold which the activity, as one whole affair, has upon a person. . . . The end to be reached may not be of sufficient importance to justify the expenditure of so much energy, or of running the risks of excessive strain. (II, pp. 46–48.)

and direct a sequence of responses which may in themselves be annoying. The annoyingness which is endured at any point in the series is a measure of the degree of satisfyingness for the individual of the outcome. The satisfying state of affairs may not be of sufficient importance to justify the forcing to conduct of conduction units so unready to conduct, or of running the risk of direct injury to the neurones involved and of producing in the system the states corresponding to over-excitement and worry.

When an activity persists in spite of its temporary blocking by an obstacle, there is a situation of *mental* stress: a peculiar emotional condition of combined desire and aversion. The end continues to make an appeal, and to hold one to the activity in spite of its interruption by difficulties. . . . The emotion of effort, or of stress, is a warning to *think*, to consider, to reflect, to inquire, to look into the matter. Is the end worth while under the circumstances? Is there not some other course which, under the circumstances, is better? . . . If the final decision is to give up, . . . giving up now involves an appeal to reason. . . . However, reflection . . . may lead not to reconsideration of ends, but to seeking for *new* means. (II, pp. 49–50.)

When there are conflicting claims for control of behavior of remote satisfaction and immediate annoyance, an emotional state of combined desire and aversion arises, which impels to thought. There may ensue inquiry whether the remote satisfyingness outweighs the immediate annoyance; or inquiry whether there is not some other behavior-series which, though accompanied by less annoyance, will be followed by the same satisfying state of affairs. After such consideration there may be either a cessation of the series of responses, or a seeking for other series accompanied by less annoyance which will still lead to the desired end.

This experience of resistance has a double effect. . . . One effect is weakening of the impetus in the forward direction; the existing line of action becomes more or less uncongenial because of the strain required to overcome difficulties. As a consequence, the tendency is to give up this line of action and to divert energy into some other channel. On the other hand, meeting an obstacle may enhance a person's perception of an end; may make him realize more clearly than ever he did before how much it means to him; and accordingly may brace him, invigorate him in his effort to achieve the end. . . . He now *thinks* of what he is doing, instead of doing it blindly from instinct or habit. . . . Thought is stimulated to discover the best methods of dealing with the situation. (II, pp. 51–53.)

The effect of meeting a situation that requires conduction along neurones and across synapses unready for conduction is twofold. On the one hand, there may be a weakening of the mind's set; the present behavior-series becomes more or less annoying because of the unreadiness to be overcome. As a consequence the individual tends to change his behavior and to start another behavior-series. On the other hand, the state of affairs to follow the end of the series and the accompanying satisfyingness may be aroused to fuller consciousness, and accordingly may give increased vigor to the set. The individual now responds analytically to the various aspects of the situation, instead of making an instinctive or previously learned response to the gross situation; and is stimulated to varied reaction.

The really important matter in the experience of effort concerns its connection with thought. The question is not the amount of sheer strain involved. (II, p. 51.)

Thus, the really important problem in regard to effort lies not in the amount of unreadiness overcome, but in the extent to which it stimulates thinking.

If one mean by a task simply an undertaking involving difficulties that have to be overcome, . . . [tasks] are educative because they supply an indispensable stimulus to thinking, to reflective inquiry. . . . The question to be borne in mind is . . . twofold: Is this person doing something too easy for him — something which has not a sufficient element of resistance to arouse his energies, especially his energies of thinking? Or is the work assigned so difficult that he has not the resources required in order to cope with it — so alien to his experience and his acquired habits that he does not know where or how to take hold? . . . What happens when work too difficult, work beyond the limits of capacity, is insisted upon? . . . He must keep up the *form* of attentive study, and produce a result as evidence of having been occupied. . . . Any external and routine device is employed to "get the answer" — possibly surreptitious aid from others or downright cheating. (II, pp. 54–57.)

A task — defined as a situation calling for a modified form of response — is educative because it supplies an indispensable stimulus to selective thinking. Tasks may be so easy that they arouse at once an instinctive or a learned response and require no analysis of the situation; or so difficult that the pupil does not have the facts to reason with, does not have them arranged in systems in the way in which they will be needed, or lacks a sufficiently developed capacity for selective thinking, and consequently cannot react adequately. When a pupil is confronted with a task of the latter type, and response is demanded, he must persistently react in such a way as to seem to be making responses of attention to the situation, and must give evidence of having been active. Hence he makes irrelevant reactions to "get the answer," possibly inducing some other pupil — without the teacher's knowledge — to aid him, or unfairly imitating the responses of others.

Good teaching . . . appeals to established powers while it includes such *new* material as will demand their redirection for a new end, this redirection requiring thought — intelligent effort. . . . Educative effort is a sign of the transformation of a comparatively blind activity (whether impulsive or habitual) into a more consciously reflective one. . . . It is a part of the process of growth of activity from direct interest to indirect. (II, pp. 58–59.)

Good teaching makes use of the connections which have already been formed, while it supplies such new stimuli as will lead to the formation of additional bonds as a result of connection-forming of the analytic and selective type. Educative effort results when response which because of preformed or learned bonds has been occurring practically without the mediation of ideas is modified into response which involves analysis and selective thinking. It accompanies the development of a behavior-series as it becomes controlled by derived interest rather than immediate interest.

The important question . . . is what specific subject-matter is so connected with the growth of the child's existing concrete capabilities as to give it a moving force. What is needed is not an inventory of personal motives which we suppose children to have, but a consideration of their *powers*, their tendencies in action, and the ways in which these can be carried forward by a given subject-matter. . . . We shall measure the utility of new subject-matter and new modes of skill by the way in which they promote the growth of these powers. (II, pp. 62–63.)

The important question is what specific subject-matter supplies situations so suited to the original capacity of the individual and the bonds already acquired that it tends to form desirable new bonds and to make them satisfying. What is needed is not an inventory of satisfiers and annoyers which we suppose to influence children's behavior, but a consideration of their capacities and the ways in which related bond formation of a desirable character may be brought about by the use of a given subject-matter. We shall measure the utility of new subject-matter and new modes of skill by the extent to which they result in the cultivation of these capacities.

4. Types of Educative Interest

The idea of "self-activity" . . . has long been a name for the ultimate educational ideal. . . . To make the idea of activity effective, we must take it broadly enough to cover all the doings that involve growth of power — especially of power to realize the *meaning* of what is done. This excludes action done under external constraint or dictation, for this has no significance for the mind of him who performs it . . . also mere random reaction to an excitation that is finished when the momentary act has ceased . . . also . . . action so habitual that it has become routine or mechanical. (II, p. 66.)

The idea of self-activity has long represented the ultimate aim of education. The term activity should be taken to refer to all responding which involves increase in the number and organization of connections, especially those concerned in the comprehension of the purport of the activity. It excludes response due to external compulsion, for activity of this type has no significance to the individual responding; mere random reaction to a stimulus that does not persist after the isolated response has ceased; and conduction along neurones so ready to conduct that conduction takes place without the mediation of ideas.

The kinds of activity remaining as true educative interests vary indefinitely with age, with individual native endowments, with prior experience, with social opportunities. It is out of the question to try to catalogue them. But we may discriminate some of their more general aspects, and thereby, perhaps, make the connection of interest with educational practice somewhat more concretely obvious. (II, p. 67.)

The kinds of activity which are educative in the true sense of the term vary with maturity, original nature, previous training, and environment. A complete inventory cannot be given, but some of their more general aspects will be described, and thereby, perhaps, the relation between interest and educational practice may be more concretely indicated.

1. . . . The human young have to *learn* most of the things that the young of other animals do instinctively or else with a slight amount of trying. . . . In learning these things human offspring are brought to the need of learning other things, and also to acquiring a habit of learning — a love of learning. . . . In so far as a physical activity has to be *learned*, it is not merely physical, but is mental, intellectual, in quality. (II, p. 67.)

1. Human offspring have to form after birth many bonds which in the young of other animals are already preformed or nearly so. In forming these bonds they are brought to the need of forming other connections and also to acquiring a habit both of connecting and of finding the activity satisfying. Learned bodily activity signifies not only motor response, but also mental.

Only with children having specialized intellectual abilities is it possible to secure mental activity without participation of the organs of sense and the muscles. Yet how much of elementary schooling has consisted in the imposition of forms of discipline intended to *repress* all activity of the body! . . . The sense-organs are simply the pathways of *stimuli to motor-responses*, and . . . it is only through these motor-responses, and especially through consideration of the adapting of sense-stimulus and motor-response to each other that growth of knowledge occurs. . . . Even in the ordinary hard-and-fast school . . . the physical activities that are still allowed . . . are much more important than is generally recognized in holding attention. (II, pp. 69–71.)

In the past the value of bodily activity has been underestimated. This is indeed unfortunate, for only gifted children can have mental response without involving the sense organs and the muscles. In fact, the sense-organs exist for the reception of stimuli designed to lead to motor-response. Increase of knowledge occurs only as the child makes motor-responses, and in particular as he directs his attention toward modifying the response in the light of his analysis of the situation. Even the bodily activities permitted in the traditional school are much more important in holding attention than is generally recognized.

2. . . . A higher form of activity involving the sensori-motor apparatus of the body is found when the control over external objects is achieved by means of tools of some sort. . . . It is the discovery and use of extra-organic tools which has made possible . . . complicated activities of a long duration. . . . It is this prolongation and postponement which requires an increasing use of intelligence. The use of tools and appliances (in the broad sense) also demands a greater degree of technical skill than does mastery of the use of the natural organs — or rather, it involves the problem of a progressively more complicated use of the latter. . . . For a time children are satisfied with such changes as they can bring about with their hands and by locomotion and transportation. . . . Children as their powers mature . . . want to use the things that are fitted to their purposes and that will really accomplish certain results. (II, pp. 74–77.)

2. A higher form of activity involving the bonds which connect sensory situation and motor-response is found when the control over features of the environment is secured by means of tools of some sort. It is the discovery and use of these which has made possible behavior involving a larger number and a better organization of bonds, and extending over a longer period of time. The more complex the behavior-series and the longer its duration the more does it require responses of thought. Moreover, the use of tools and other objects produced by human learning demands a greater degree of skill than does efficient use of the bodily organs, — or rather, it involves more and more elaborate use of them. For a time children are satisfied with such changes as they can produce by manipulation and by movements of locomotion and the displacement of objects. As their instincts and capacities mature, children want to use the things that are adapted to accomplish their aims.

There seems to be no better name for the acts of using *intermediate* means, or appliances, to reach ends than *work*. . . . Play and work cannot . . . be distinguished from one another according to the presence or absence of direct interest in what is doing. . . . What differentiates it [an activity using tools] . . . is an *intellectual* quality; a remoter end in time serves to suggest and regulate a series of acts. Not to introduce an element of work *in this sense* when the child is ready for it is simply arbitrarily to arrest his development. . . . The change from an activity with an end near by to one with an end farther off does not come all at once, nor at the same time with respect to all things. . . . Thus there is no ground for the assumption that children of kindergarten age are capable only of make-believe play, while children of the primary grades should be held to all work and no play. (II, pp. 78–80.)

The term which perhaps best expresses the using of objects in the environment for the accomplishment of an end is *work*. It can be distinguished from play not in the fact that intrinsic interest in the activity is present or absent, but in the fact that an end more remote in time serves to suggest and direct the series of responses. Not to arrange situations which call forth activity of this character when the appropriate tendencies have matured is arbitrarily to leave undeveloped the capacity to respond on the basis of ideas. The tendency to respond to situations in this manner develops gradually and appears at different dates for different situations. Thus the doctrine is false that the kindergarten age is the age for make-believe play, whereas the primary age is the age for all work and no play.

3. So far as . . . the interest in discovery or in finding out what happens under given circumstances — gains in importance, there develops . . . the distinctively intellectual interest. . . . Instead of thinking things out and discovering them for the sake of the successful achievement of an activity, we institute the activity for the sake of finding out something. . . . It is the

3. As interest in meeting novel problems or in finding out the consequent happening of certain controlled situations gains in importance, interest in purposive thinking and action develops. Instead of problem-solving and making adaptive responses to novel data for the sake of the satisfying accomplishment of an activity, the individual initiates the activity in order to find out some-

business of educators . . . to encourage the developing of these intellectual phases of an activity. (II, pp. 81–83.)

thing. It is the work of the teacher to see that interest in purposive thinking and action *per se* becomes intrinsic.

4. Social interest, interest in persons, is a strong special interest, and also one which intertwines with those already named. . . . Children's contact with other persons is continuous; and there are practically no activities of a child that are isolated. . . . It is through entering into the actions of others . . . that he finds the most significant and the most rewarding of all his experiences. . . . Much of the so-called animistic tendency of children . . . is at bottom nothing but an overflow of their social interests. . . . Impersonal material should be presented so far as possible in the rôle it actually plays in life. (II, pp. 84–87.)

4. Interest in the behavior of other human beings is surely rooted and grounded in original nature, and overlaps with the types already mentioned. Situations in which human beings are elements are ever-present, and practically all activities of children are social in character. Behavior related to the behavior of others they find most significant and satisfying, and even attribute to inanimate objects and events the characteristics of human beings. This interest should be utilized by the presentation as far as possible of subject matter not dealing directly with facts about human beings in its social relations.

The strength of the interest in other persons and in their activities and aims is a natural resource for making activities broad, generous, and enlightened in scope; while the physical, manual, and scientific interests in their identification with *objects* make for a broadening of the self. (II, pp. 88–89.)

The strength of this type of interest is capital which should be invested in the modification of responses so that they will be better adapted to the promotion of human welfare; while the interests in bodily activity, manipulation, and purposive thinking and acting, because of the significance of objects in connection with them, increase the scope and satisfyingness of man's activity.

5. Place of Interest in the Theory of Education

Interests are one in principle. They all mark an identification in action, and hence in desire, effort, and thought, of self with . . . the objects in which the activity terminates (ends) and with the objects by which it is carried forward to its end (means). . . . At bottom all misconceptions of interest, whether in practice or in theory, come from ignoring or excluding its *moving, developing* nature; they bring an activity to a standstill, cut up its progressive growth into a series of static cross-sections. (II, pp. 90–91.)

The common principle underlying all interests lies in the individual's finding satisfaction of some want in the outcome of the responses, and likewise satisfaction, at least derived if not intrinsic, in the various responses demanded for the producing of the outcome. Misconceptions arise in connection with dividing up the response-series into its elements and considering the satisfaction attendant upon the individual responses rather than upon the series as a whole.

The positive contributions of the idea of interest to pedagogic theory are twofold. In the first place, it protects us from a merely *internal* conception of mind; and, in the second place, from a merely *external* conception of subject-matter. (II, pp. 91–92.)

The contribution of the correct conception of interest to pedagogy is twofold: first, the implications of dynamic psychology are emphasized; and second, subject matter is thought of as that which furnishes situations appropriate for the calling forth of adequate and desirable responses.

Interest is obtained not by thinking about it and consciously aiming at it, *but by considering*

The means of obtaining interest is not by thinking about it and aiming directly at it, but by

and aiming at the conditions that lie back of it, and compel it. If we can discover a child's urgent needs and powers, and if we can supply an environment . . . to direct their adequate operation, we shall not have to think about interest. (II, pp. 95–96.)

considering and aiming at the conditions which underlie and determine it. If the real demands of the child's nature and his capacities can be discovered, and if the appropriate stimuli to arouse the desired responses can be supplied, the problem of interest is solved.

B. Conclusion

Interest and discipline are connected, not opposed. . . . Interest and discipline are correlative aspects of activity having an aim. . . . The developing course of action, whose end and conditions are perceived, is the unity which holds together what are often divided into an independent mind on one side and an independent world of objects and facts on the other. (I, pp. 152, 161–162.)

Interest and effort, two apparently conflicting conceptions, emphasize complementary features of an organized series of responses initiated for the accomplishment of an end. An organized series of responses for the accomplishment of an aim, the conditions and significance of which are apparent, is the unifying principle which holds together what theorists often divide into an independent mind on the one side and an independent environment on the other.

Upon the philosophical side, . . . various dualisms culminate in a sharp demarcation of individual minds from the world, and hence from one another. . . . There are certain educational considerations which correspond to it; such as . . . the tendency to treat interest as . . . without intrinsic connection with the material studied. . . . The conceptions of the first portion of this book . . . are consistent with the philosophy which sees intelligence to be the purposive reorganization, through action, of the material of experience; and they are inconsistent with each of the dualistic philosophies mentioned. (I, pp. 340, 377.)

Upon the philosophical side, various dualisms result in a divorce of individual minds from the world, and hence from one another. There are certain educational theories which reflect a similar divorce; such as that which looks upon interest as having no intrinsic connection with the data with which the pupil works. The conceptions of the first portion of this book are in harmony with the philosophy which sees as the end of human learning the changing, through response to it, of the environment in which original nature operates into a nature more hospitable to the activities man craves; and they are inconsistent with each of the dualistic philosophies mentioned.

ARRESTED FOR SPEEDING: A HUNDRED MILLION AMERICANS

GARRY CLEVELAND MYERS

Cleveland School of Education, Cleveland, Ohio

More than a hundred million Americans have been arrested on account of speeding. Most have drawn life sentences. They were arrested on account of too great haste in learning! Our smallest children start to pay the price of speed. They pay it while they learn in school, and later on in life they pay it with compounded interest. Infants, as well as adults, are arrested for such speed. Time they must serve and labor, and hard labor, too, on account of speeding. This is particularly so in all matters which are more or less of a mechanical nature. Now, they learn more of this sort than we are sometimes aware of—the thousands of facts which they are asked to master, the numerous combinations which they must make their own. Spelling and number work, for example, are for the most part made up of mechanical associations, the mastery of which demands specific habits. In these studies generally there is just one way, and only one right answer. A single deviation from the fact or association to be learned not only gives the child immediately a bad product but also stands in the way of everything he learns thereafter. *We cannot learn anything wrong without losing something.* This loss, moreover, is not only in the thing learned wrong but in many other things associated with it. When, for example, I learn to spell a word wrong, not only is that word lost to accurate learning then, but probably on all subsequent attempts to spell it. Worse still, its wrong spelling hinders correct spelling of other words once learned right or other new words to be attempted later. Therefore, we are arrested in our learning by every error that we make.

Think of the time lost by the teacher and the child on account of what the child learns wrong. Perhaps half of the school hours are spent in correcting such mistakes. Don't we say often of grading papers that we are going to "correct them"? Don't we actually spend a lot of our time on what we call drill, which in fact is little more than our attempt at reducing errors?

Unfortunately, however, much of our drill fixes errors as well as blots them out. Sometimes, indeed, drill establishes wrong learning more forcefully than right learning; so that undoubtedly much drill is far worse than no drill at all.

Indeed, we have a wrong notion, often, about drill. In practice, it very frequently means a kind of testing activity, whereas it ought to mean *correct repetition* of what has once been learned. In other words, it ought to mean *overlearning.* For the child who "learns" that three and four are seven, that seven and nine are sixteen, for example, to be called upon to repeat the answer to such combinations before each one is firmly and accurately fixed is for his learning most disastrous.

Much of the damage to the learner is done here. In his drill he is tested and by this test is very often stimulated to guess so as to make frequent errors long before he has developed correct associations — in short, before he has learned these combinations.

Speaking in familiar terms, one may say the child usually is *drilled too soon*. To illustrate, children today have learned apparently quite well the third line of tables. They have gone over it a number of times, so that most can repeat it correctly. Tomorrow these same children are given a game at matching numbers with several numbers multiplied by three. One child is pitted against another, or one group vies with another group. There is great excitement. But alas, from a quarter to a half of the children's answers may be wrong. For them it is one grand mess of numbers. The poor children, especially those of the losing group, feel mortified. Not only do these children playing the game suffer a great loss in learning, but the other children looking on have their former learning depreciated through the confusion which is suggested by what they hear and see. As a consequence practically all the children of the class know, on this second day, only a part of that table correctly. Practically all have some wrong association. Now, think of the days and days which will pass before all these children will have eradicated these mistakes. Some of these errors, indeed, will be cropping out when these children will have entered college. In the meantime, what has happened? There have been hundreds and hundreds of errors, scores of delays and arrests in learning, and a tremendous amount of energy burned up in irritation and annoyance of the children at the errors they have made during all these years, to say nothing about the annoyance which their teachers have suffered. Now we can trace nearly all these errors to the too early "testing" of those children after they had but slightly learned the third multiplication table.

To reiterate, then, a tremendous waste in learning is in the tendency of the teacher to demand of the child a response before that child has developed the associations which the demand calls for. It were a better way if the child in the early stages of drill were set to repeating not only the parts of combination but the combination entire. For example, in the drill, let him repeat the whole process, "three times nine equals twenty-seven" instead of filling in the space "three times nine equals —." The danger is that he will put something other than the correct answer in response to "three times nine." Until he can give the correct answer, the demand should not be made.

The same phenomenon can be illustrated in spelling. The child, eager to have evidence of progress in learning his spelling lesson, looks away from his book or paper, spelling the word to himself before he has learned it thoroughly; consequently he often spells it wrong, which means that he studies it wrong. How frequently, as a boy, I used to beg my father to pronounce my spelling lesson, only to discover after a few moments that he refused to pronounce further because he said I did not know the lesson.

Desirable as it may be that children do not repeat in study what they have well fixed in their minds, what they already know perfectly, there is much greater danger that what they think they know or what they know only well enough to repeat for the present, they do not know as a matter of very long and permanent possession. So, then, to assume that when a child can spell ten words out of twenty correctly, he needs drill and study only on these ten words is not wholly warranted. Granting for argument that it were a good thing in teaching spelling to have children study only those words that they miss in a preliminary spelling, would it not be well to teach the child in this instance always to leave a blank for the word that he is not absolutely sure he can spell, so that he will not be handicapped in speed and effort by the encumbrance of this error?

But how shall we stimulate a child to leave a blank or keep quiet when he is not certain of the answer? We shall do so by leading him to see the value of correct response and the loss to his own learning on account of wrong responses. But how shall we do this? We shall do it by *revolutionizing our marking system.* When, for example, a child gives a right response in all specific and mechanical instances such as spelling and number work, let his mark be in terms of that correct response. But let each error be valued not only as something not added to his grade, or as something merely missed, but as a positive loss; let each error be evaluated as it really is, as a penalty, as an encumbrance, to his learning. Now, when a child learns that four times eight are thirty-six, he not only has failed but he has established a positive liability which is costly to him and which will be in his way when that association comes up again. Moreover, as pointed out above, not only is that wrong association in his way, but it affects for ill the learning of other numbers. So then, indeed, any wrong association is not only a positive loss of a unit but more than that.

But to be charitable and to make the process simple, let the penalty be in terms of that unit. In other words, when an error is made, the relative value of that unit should be subtracted from the total mark which the child ordinarily would get. To illustrate, a child spells six words out of ten correctly, but spells the four other words wrong. Now he earns sixty per cent on those he spells correctly. He not only fails to get any points on the four spelled wrong, but because he spelled them wrong, he actually loses at least forty per cent on account of this misspelling. His score should be, then, 60−40, or 20. If, on the other hand, he had spelled 60 and not attempted any more, his score should be 60. The rule, in other words, suggested for marking so as to develop in the child the habit of accuracy in spelling and in number work is *right minus wrong.*

"But," says some one, "will not the child be discouraged?" Probably he will at first if for years he has been rewarded for what he did not do, and led to think that he had made the progress which he had not made. The teacher, however, if consistent, will soon be able to sell to children of practically any age not only the justice but also the desirability of such grading.

Of course, the better and easier way is to start out with the primary grades and train children by the way you grade them and evaluate their work to recognize the importance of accuracy first. They will soon see its value in the greater speed which they attain. They will not only be very speedy, they will not only have covered the required course, but they will have exceeded it. Better still, they will be able to master with precision and with consequent confidence the simple fundamentals which they constantly will have to use. As a result a business man will call us blessed to have trained a child to be precise. A greater accuracy will mean a greater speed, but, contrary to the delusion of many a teacher, the reverse will not follow. Woe unto us when we accept the implication of Monroe that the average accuracy attained by children the country over is a satisfactory standard! And woe to us, moreover, if, as many seem to be doing, we set out to improve our children's accuracy and efficiency in arithmetic by pressure and by merely speeding up!

This paper has assumed throughout that every error tends to reduce speed and that emphasis upon accuracy, although it may mean a lower progress in the earlier stages of learning, eventually will mean acceleration.

This theory is justified in the results of a study by the author and Misses Broom and Spett, in which they found that early emphasis on speed in a certain kind of learning, such as placing blocks in a box according to a certain pattern and in learning to typewrite, meant increased speed after about fifty days; and that this increase with such emphasis on accuracy was much greater than the speed attained when the emphasis was upon speed. In other words, although the speed learner worked more rapidly at the outset, he later on not only worked with poorer quality but, in spite of his greater effort, his speed was slower than those who had put emphasis on accuracy at the outset.[1]

In attempting to speed we pay the price in terms of *less speed* and *less accuracy*. We shall hope to avoid arrest in learning, and to escape the punishment of hard labor in eradicating errors, by making sure that our earliest learning is accurate learning. To this end we shall so mark our school children that every error will prove to them to be a costly error. We shall teach them that a wrong answer in matters of mechanical learning is far worse than no learning; that "'tis not better to have learned and lost than never to have learned at all." We shall teach children to say, "I do not know," and to leave blank spaces on the page when they are not certain. In so doing we shall early develop in them a scientific point of view, as well as frankness and efficiency.

[1] See "Speed versus Accuracy in Learning," *School and Society*, Dec. 7, 1918, pp. 687–690.

THE CLEARING HOUSE

TRAINING ATYPICAL CHILDREN

It is rather startling, even when one has seen the work going on, to realize that in less than four months an atypical class of seven girls and nine boys earned $226.29 by handwork and spent $117.93. But it is the educational side of the semester's work that I want to present. In order to do that, I'll have to mix in the theory behind our work with the recital of actual accomplishment.

A teacher may have read all there is available on the training of defective children, but when she goes into the classroom she will immediately be conscious of two practical problems facing her most imperatively: first, what to do; second, how to get it done in such a way as to equip the child with a set of stable habits acceptable to the world. The first problem is being worked out slowly on a sound basis, but there is at present very little at hand to help the teacher new to the work. Leaders, like Meta Anderson of New Jersey, are saying boldly in words and convincingly in practice that the guiding principle must be: start where the child is, no matter how crude the beginning, and lead him on step by step to where he can do something well enough to make him both useful and happy. Success is as fundamental for the atypical child as for the superior; it is likewise as important that he work to capacity. The projects undertaken this last semester by our atypical class illustrate the application of this principle.

There were three projects running along together. The first one concerned the care of the classroom, lunch room, and kitchen; under a posted schedule that provided for training and practice for each child in every phase of the work, the class assumed entire charge of keeping these rooms clean and in order. This project had behind it these convictions: these children cannot become leaders in industry, for they lack initiative and the ability to make quick judgments and adjustments. But there may still be a place for them, since for every leader there must be many assistants. For instance, an atypical boy may not become a head janitor, but he can be trained to such habits of thoroughness in sweeping and dusting, such orderliness, promptness, dependability, etc., that he will make a valuable helper. One of these girls may never become a skilled caterer, but she may be trained to do all the things about a house that require merely a thorough knowledge of the proper way to do them and care in repetition; for such workers there is a constant demand.

The second project was to prepare daily a hot dish to sell to the teachers. In planning this we recognized both the needs and the limitations common to these girls; they will need to know how to cook simple, wholesome foods, for most of them come from and, sad to say, will marry into either poor or medium-class homes. But with low mentality they can never really grasp scientific cookery; so we teach them simply practical cooking in normal quantities. For instance, one day they make biscuits and apple sauce for ten; another day, a cheap cut of meat is made delicious with proper seasonings and dumplings; again, it may be pumpkin pies or tapioca pudding. Whatever it is, it must be salable; and expenses must not exceed income. The demonstration that this is possible by

careful planning is a revelation that makes a deep impression, and is one that we believe will carry over into later life and make for increased happiness and comfort. The success of their work, the visible pleasure of the people served with well-cooked food, and the money returns (about $20 a month earned and spent) all tend to make kitchen work attractive to girls whose best opening lies in that line.

The third project was the fair, which supplied numerous kinds of handwork for both boys and girls, and which was the money-maker. The articles made ranged from five-cent nut cups for real dinner parties to a five-dollar table and chairs for Santa Claus to donate to some worthy child. There were dish towels neatly hemmed and decorated by the girls not yet able to handle the delicate silks and laces that went into the more expensive articles. Everything was so well made, the artistic things were so really beautiful, that they sold themselves. The children handled the sales and counted the money; and the thrill that came from actually seeing in good round dollars the commercial value set by the world on their work was one of those thrills, not yet cartooned in the *Tribune*, "that comes once in a lifetime."

Every child had his contribution of labor; sometimes it was very simple and homely, but it was a necessary part and therefore to be respected. Sometimes a child tried something beyond his powers, for we do not believe that any child should continue to do over and over in school the thing he has already learned to do well; one step thoroughly learned should lead promptly to an advance step. This means occasionally the spoiling of a little material, but since expense accounts are kept by the class the point is easily brought home, and the child is the more willing to begin where he is in order to move forward through contributions instead of losses.

All this requires much of the teacher — wide familiarity with handwork; the ability to spy out latent capacities; to distinguish lack of application or concentration from incapacity; to organize thoroughly but simply; to teach directly so that failures are seldom, but not to be afraid of failures; to be quick in making judgments and in meting out elemental justice; to know exactly what she expects of the children and to demand it; and, above all, to care about each one individually, and therefore be patient to teach him over and over the step that seems so simple to everyone else.

For the child it means progress that he can see; the development of skills that others see and respect him for; a new confidence in himself that takes away the sullen look and puts the joy back into his face. Best of all, he learns that there is a place in the world for those who will take the pains to learn to do something well.

ANNE M. BRADLEY,
Principal, Peralta School,
Oakland, Calif.

READING PROJECT — "THE HOME"

One of the aims of pre-primary work is to bring all subject matter within the child's understanding. This is especially necessary in the reading lessons. For this reason a project on the home was selected to be worked out by the children and to be used during the term for reading lessons.

The first reading lessons carried on for six weeks were based on action words. These were used to help build up a reading vocabulary. During these six weeks the project was gradually being developed. We had on our sand table a house made of old wooden boxes, painted red. Nothing was said about it for a few days until one child walked around it one day and said, "I don't like that house." When asked the reason, she answered, "There is no grass around it and there are no chairs and no

tables — nothing in it." I asked her if she would like to help make some things for it and she answered, "Yes."

From that day on, we started a series of informal talks on the home. Suggestions were offered as to what was necessary to furnish the home on our sand table; what street the home should be on; and what we could do to the outside of the house to make it prettier. As the majority of the children lived on, or very near, Central Park, we decided to have our home on that street. The children suggested making beds, chairs, tables, rugs (of paper), pictures, a stove, and other necessary articles for the home. No one mentioned pianos or a victrola or other luxurious articles, which showed that their own homes have only very necessary things. As a result of these conversational lessons we correlated manual training lessons with the project, making furniture for the house during a forty-minute period each afternoon until the home was furnished.

Having furnished the home, our thoughts turned to the outside. Being on Central Park, we were obliged to make street car tracks, a street sign, and put up poles for the trolley wire. We used Dennison's crêpe paper for grass and made flowers by pasting bits of colored paper on toothpicks and sticking these flowers in plasticine all around the house. We had apple trees in bloom, made by pasting bits of green and pink papers to twigs brought in by the children. A swing was hung from one of these trees, and here we brought in a little safety talk, telling how much better it was for the children to play in the yard rather than in the street near the car.

Now our thoughts were ready to turn to reading. The children had had the experience necessary to make them understand more about what a home meant to them. We had three stories on our home. They were as follows:

Story I. We have a house.
The house is on Central Park.
The father lives in the house.
The mother lives in the house.
The baby lives in the house.

Story II. We made some chairs.
We made beds and tables.
The baby has a little bed.
The baby goes to bed early.

Story III. The father went to work.
"I want to go," said the baby.
"You stay with me," said the mother.
The father went on the street car.

In order to get the material for each story, questions had to be asked as follows:

Ques. What have we on the table?
Ans. We have a house.
Ques. Where is the house? On what street?
Ans. The house is on Central Park.
Ques. Who lives in the house?
Ans. The father, mother, and the baby live in the house.

Each day for two weeks or more the above questions were asked and the answers written on the board as given by an individual child. In this way he first recognized the story as a whole.

Having written the answers on the board, I asked, "Who can find the part which tells you *where* the house is? Find the part which tells what we have. Find the part which tells *who* lives in the house." After the children had done this, the sentences were again placed on the board in the following manner:

We have a house (as a whole)
We have
a house (in phrases)

The children were asked to find the part which says, "We have" and "A house." Finding phrases was done with each sentence. When the children were able to find the phrases on the board, phrase cards were introduced. These contained all the important phrases in the story, as:

Story I. We have
a house
the house
on Central Park
the father
the mother
the baby
in the house

Next came the finding of separate words. For example:

We have a house (as a whole)
We have
a house (phrases)
We
house (words)

Find the phrase which says, "We have." Child finds the phrase. The teacher writes phrases again in another part of the blackboard. Then she writes *We* under the phrase, *i. e. We have*
We

This was done with each phrase. When the children were able to find separate words on the board, *word cards* were introduced.

As a means of stimulating interest in drill the following games were used:

Race: Teacher holds cards before two racers. As she flashes cards, each one says the word. The one who says the word first gets the card. The one who gets the greatest number of cards wins the race.

Grocery Store: A number of cards are placed on blackboard ledge. One child is chosen for storekeeper; another child says, "I should like to buy (house)." The storekeeper hands the card which says "house" to the other child. The purchaser must know whether or not the card is correct. If the teacher acts as storekeeper she may give the child the wrong card in order to test his knowledge of the words and phrases.

Street Car: Children sit in a row, each one holding a card. When the teacher rings the bell, all children change cards, and each one must be able to tell what his ticket says or he will be put off the car.

Throughout the three stories the same method was used, that is, first reading the whole sentences, then phrases, then words. The aim was to have the children become familiar with words that they would use in the first grade. Content of first-grade stories, however, was avoided. An example of recognizing words in first grade follows:

First-Grade Story — The Little Red Hen
Pre-Primary Story — The Home

List of Some Phrases in First-Grade Story	*List of Phrases in Pre-Primary Story*
some wheat	*some* chairs
the cat	*the* house
said the goose	*said the* mother
went home	*went* to work
to go	*to* bed
on the table	*on the* street car

The above is just an example to show how, in pre-primary classes, we try to acquaint the child with words and phrases that he is apt to use in first grade. Later in the term the vocabulary learned in these stories was combined with action words. This afforded an opportunity for sight reading and called forth independence on the part of the child.

At the close of the term the children made books. A page was devoted to each story, with a picture illustrating the story. The story was printed on each sheet by the teacher. This book proved a joy to the child, for he was able to take it home and read for his parents. It also led to the correct use of books. Those made by the children were not as strong as the ones purchased in the stores and therefore required much more careful handling. Through this project, a desire to learn to read was aroused; the children gained power in independent thought and action; and a greater social spirit was created.

DOROTHY A. SEYFRIED,
Susan B. Anthony School No. 27,
Rochester, N. Y.

THE READER'S GUIDE

A SUCCESSFUL EXPERIMENT WITH A PROJECT CURRICULUM

The project idea has been applied for the most part to the technique of the teacher. Stockton, however, suggested the possibility of reorganizing the course of study so as to center at least a part of the activities in a new subject to be called "Work."[1] Bonser's *The Elementary School Curriculum*[2] presents a much more thoroughgoing attempt to reshape our ideal of the curriculum in terms of purposeful activities. One notable experiment in putting all of the instruction in certain grades upon a project basis has been reported by Dr. Wells.[3] Mr. Collings has gone much farther. He displaced entirely the traditional subjects of study in a rural school in Missouri for a period of four years and applied standard measurements in determining his results. No more significant contribution to education has been made for many years than the volume in which he discusses his experiment.[4]

The affair was conducted in accordance with modern scientific methods. Two other schools to act as control schools were selected and the experimenter assured himself that the children in all three schools were of essentially equal ability and surrounded by similar conditions. The courses of study in the control schools remained as they had been traditionally throughout the four-year period. These courses and daily programs used by the teachers appear in the book in full. In the experimental school, on the other hand, the pupils were divided into three groups and each group carried on a series of projects under four heads, namely, Play, Story, Handwork, and Excursions. The projects actually carried out, together with the materials used, are listed in detail. Teachers not attempting to make so radical a revision of their practices as was made under Mr. Collings' direction will find this feature of the book valuable in any situation.

The meat of the cocoanut seems to be found in the fact that from the standpoint of conventional knowledge and skill the pupils in the experimental school, although having no greater ability, actually excelled to a considerable degree those in the control schools. Not only that, but they equalled or exceeded the standards reported from the elementary schools of the cities as well as the country in connection with the various standard tests.

Mr. Collings, however, applied other tests to his experiment. He reports the attitude of the pupils as shown by attendance, and he describes at length the change that took place in the community as a whole. The parents became sufficiently interested so that all without exception visited the work that was going on. Evening meetings were held and the entire social life of the community changed for the better.

In the light of these findings, the burden of proof would seem to fall upon those who profess to be skeptical of the project idea and particularly of its possibilities in the reorganization of the curriculum. Mr.

[1] *Project Work in Education.* By James L. Stockton. Houghton Mifflin Co., 1920.
[2] Macmillan Co., 1920.
[3] *A Project Curriculum.* By Margaret E. Wells. Lippincott, 1921.
[4] *An Experiment with a Project Curriculum.* By Ellsworth Collings. Macmillan Co., 1923.

Collings has stated frankly the theory upon which he proceeded and his statement is reënforced with an introduction by Professor Kilpatrick, who lays down the fundamental principles upon which the experiment rested. It is difficult to see why, given a competent teacher and a supervisor with Mr. Collings' ability and point of view, the experiment could not be repeated in almost any community, provided only the coöperation of the parents could be secured.

SIGNIFICANT ARTICLES

PROCEDURE IN CURRICULUM-MAKING

In the *Journal of Educational Psychology* for January, Professor Harold Rugg of the Lincoln School discusses at length the question as to what should constitute the procedure of national committees engaged in curriculum-making. He contrasts as examples of two distinctly different procedures Thorndike's in gathering the material for his *Psychology of Algebra* and that of the Commission on the Reorganization of Mathematics in Secondary Education appointed by the Mathematical Association of America. The first is that of a carefully controlled scientific investigation. The second is characterized mainly by analysis and the formulation of opinion. One is relatively objective, the other, subjective. Dr. Rugg feels that both of these methods are essential and should be regarded as complementary. He makes a strong plea, however, for the inclusion of definite laboratory studies in the plans of all national committees engaged in gathering material for school use.

WHAT SHOULD CHILDREN READ IN SCHOOL?

Professor B. R. Buckingham, the editor, begins in the January number of the *Journal of Educational Research* a series of articles on "What Children Should Read in School." The opening installment presents briefly a history of the content of reading books, including recent investigations both as to actual practice and as to children's interests. The writer thinks that the same mistake has been made in the production of readers as in the case of geographies and histories: "The books are too ambitious." We should more sharply differentiate our purposes and select material adapted to accomplish them. It is a question whether we should include as large a number of literary masterpieces in the reading books as we do at the present time.

THE ELEMENTARY SCHOOL LIBRARY

But little material is available on the subject of the elementary school library. Indeed, the thing itself exists but rarely. A suggestive article on the subject from the pen of Mr. C. C. Certain will be found in the *Elementary School Journal* for January. Among the good points which the writer makes is that the schools are crowding their shelves with so-called supplementary texts far beyond any practical use. They should be supplanted in favor of real library books, magazines, and visual materials. These would not, however, be of great service without the direction of a trained elementary school librarian. Such a person should not only look after books but give class instruction in the care and use of them. She should assist the pupils with notebook assignments, should train pupil helpers, encourage slow readers, and in general function as an expert in the use of books. The work is too technical in its requirements to remain as it has in the past—in the hands of the ordinary classroom teacher.

SCHOOL MARKS ONCE MORE

Like the poor, school marks are with us always. The problem is how to improve them. A very suggestive scientific study of the question is contributed by Mr. L. A. Sharp to the *Peabody Journal of Education* for January. He tabulated the marks

given by forty teachers in the city of Knoxville, Tennessee, and equated them so as to obtain a common denominator. He concludes from this study that, in view of other evidence available, the teachers' marks are unreliable as indices of an individual's ability. Some teachers give a high percentage of high marks and others a low percentage. Interestingly enough, a high percentage of high marks was found not necessarily to mean a low percentage of failures, and the reverse. Some more dependable objective means of determining a pupil's ability the writer thinks is indispensable.

THE NEW BOOKS

The New Psychology and the Parent. By H. Crichton Miller. New York: Thomas Seltzer, 1923. Pp. 251.

Methods in Elementary English. An Introduction to the Teaching of Good English in Speaking and Writing. By Nell J. Young and Frederick W. Memmott. New York: D. Appleton & Co., 1923. Pp. xiv+238. Illus.

Creative Music for Children. A Plan of Training Based on the Natural Evolution of Music, including the Making and Playing of Instruments, Dancing, Singing, Poetry. By Satis N. Coleman. New York: G. P. Putnam's Sons, 1922. Pp. xvi+220. Illus.

A Study of American Intelligence. By Carl C. Brigham. Princeton University Press, 1923. Pp. xxvi+210. $3.50.

The Early Herdsmen. By Katharine E. Dopp. Chicago: Rand McNally & Co., 1923. Pp. 231. Illus.

National Education in the United States of America. By DuPont de Nemours. Translated from the Second French Edition of 1812 and with an Introduction by B. G. DuPont. Newark, Del.: University of Delaware Press, 1923. Pp. 187.

Literature and Life. Book Three. By Edwin Greenlaw and Dudley H. Miles. Chicago: Scott, Foresman & Co., 1923. Pp. 639.

Verse of Our Day. An Anthology of Modern American and British Poetry. By Margery Gordon and Marie B. King. New York: D. Appleton & Co., 1923. Pp. xxxiii+371. $2.00.

The Unstable Child. By Florence Mateer. New York: D. Appleton & Co., 1924. Pp. xii+471.

Rudiments of Speech. A System of Training in Oral Expression. By Edwin Gordon Lawrence. New York: Scribners, 1923. Pp. xii+146. $.80.

The Teacher and the School. Revised edition. By Chauncey P. Colegrove. New York: Scribners, 1922. Pp. xxiii+446. $1.50.

Education for Citizenship in a Democracy. By Fredric P. Woellner. New York: Scribners, 1923. Pp. 260. $1.60.

Elements of Human Psychology. By Howard C. Warren. Boston: Houghton Mifflin Co., 1922. Pp. 426.

Home and Community Life. Curriculum Studies for the Elementary School. By Gertrude Hartman. New York: E. P. Dutton & Co., 1923. Pp. 210. $3.00.

Junior Business Training. By Frederick G. Nichols. New York: American Book Co., 1923. Pp. 239.

An Investigation of the Written Examination as a Measure of Achievement with Particular Reference to General Science. A Thesis. By Joseph Bardy. Philadelphia: University of Pennsylvania. Pp. 176.

The Fourth "R": The Forgotten Factor in Education. By Homer S. Bodley. New York: Revell, 1923. Pp. 271. $1.75.

A Course in Arithmetic for Teachers and Teacher-Training Classes. By James R. Overman. Chicago: Lyons & Carnahan, 1923. Pp. 376.

Teachers College, Columbia University, Contributions to Education, 1923: No. 131, *The Interests, Abilities and Achievements of a Special Class for Gifted Children*, by Genevieve Lenore Coy; pp. 194. No. 134, *An Inventory of the Minds of Individuals of Six and Seven Years Mental Age*, by Grace Adelaide Taylor; pp. 147. No. 136, *Tests for Vocational Guidance of Children Thirteen to Sixteen*, by Herbert A. Toops; pp. 159. No. 138, *Parish Education in Colonial Virginia*, by Guy Fred Wells; pp. 95. No. 139, *The Prognostic Value of a Primary Group Test:* A Study of Intelligence and Relative Achievement in the First Grade, by Bess V. Cunningham; pp. 54.

Child-Library Readers. Elson Extension Series. Chicago: Scott, Foresman & Co., 1923.

A Third Latin Book: Selections from Caesar, Cicero, Ovid. By F. W. Sanford, H. F. Scott, and C. H. Beeson. Chicago: Scott, Foresman & Co., 1923. Pp. 535.

The Humanizing of Knowledge. By James Harvey Robinson. New York: Doran, 1923. Pp. 119. $1.50.

Problems, Projects, and Experiments in Biology. By Wm. H. Atwood. Philadelphia: Blakiston, 1923. Pp. 114. Illus.

Number Projects for Beginners. By Katherine L. McLaughlin and Eleanor Troxell. Philadelphia: Lippincott, 1923. Pp. 126.

Vue Générale de la Littérature Française. By Firmin Roz and Leopold Cardon. New York: Allyn & Bacon, 1923. Pp. 371. Illus. $1.60.

A First Course in Algebra. By Edward I. Edgerton and Perry A. Carpenter. New York: Allyn & Bacon, 1923. Pp. 405. $1.20.

A Text-Book in Citizenship. By R. O. Hughes. New York: Allyn & Bacon, 1923. Pp. xxvi+748. Illus. $1.60.

The Progressive Road to Silent Reading. Sixth Year. By W. L. Ettinger, E. D. Shimer, and J. J. O'Regan. New York: Silver, Burdett & Co., 1923. Pp. 384.

Teenie Weenie Land. By William Donahey and Effie E. Baker. Chicago: Beckley-Cardy Co., 1923. Pp. 128. Illus.

Cheerful Children: A Book of Verses. By Edmund Vance Cooke. Chicago: Beckley-Cardy Co., 1923. Pp. 91. Illus.

Responsible Citizenship. By Arthur B. Mavity and Nancy B. Mavity. Chicago: Sanborn & Co., 1923. Pp. 432. Illus.

High School English: Composition-Rhetoric-Literature. By Alfred A. Kern and Stuart G. Noble. Dallas: Southern Publishing Co., 1922. Pp. 592. $1.40.

General Science Syllabus. By J. C. Loevenguth. New-World Science Series. Yonkers, N. Y.: World Book Co., 1923. Pp. 72. $.80.

General Botany. By Edgar N. Transeau. New-World Science Series. Yonkers, N. Y.: World Book Co., 1923. Pp. x+560. Illus.

The Will-Temperament and Its Testing. By June E. Downey. Yonkers, N. Y.: World Book Co., 1923. Pp. 345.

Child Labor and the Constitution. By Raymond G. Fuller. New York: Crowell Co., 1923. Pp. xvi+323.

The Pilot Arithmetics. Book I, by Lou Belle Stevens and James H. Van Sickle; pp. 272. Book II, by Harry B. Marsh and James H. Van Sickle; pp. 304. *Teachers' Manual for Grades One to Four;* pp. 256. New York: Newson & Co., 1923.

Little Journeys in America. By Rose Henderson. Dallas: Southern Publishing Co., 1923. Pp. 269. Illus.

The Writer's Index of Good Form and Good English. By John M. Manly and Edith Rickert. New York: Henry Holt & Co., 1923. Pp. 261.

The Silent Reading Hour. By Guy T. Buswell and William H. Wheeler. Chicago: Wheeler Publishing Co., 1923. Teachers' Edition First Reader, pp. x+182+57. Second Reader, pp. x+246+46. Third Reader, pp. x+246+50. Illus.

Handbook of Effective Writing. By Walter Kay Smart. New York: Harper Bros., 1922. Pp. xviii+267.

The Century Book of Selections. By Garland Greever and Joseph M. Bachelor. New York: Century Co., 1923. Pp. xviii+431. $1.50.

Modern Short Speeches. Compiled by James Milton O'Neill. New York: Century Co., 1923. Pp. xvi+394. $1.75.

Workaday English. By Stella Stewart Center. New York: Century Co., 1923. Vocational Series. Pp. 227. $.90.

Special Talents and Defects. By Leta S. Hollingworth. New York: Macmillan Co., 1923. Pp. xx+216.

The Child's Mind and the Common Branches. By Daniel W. LaRue. New York: Macmillan Co., 1924. Pp. 483.

Reading to Find Out. A Silent Reader for Primary Grades. By Frances Ross. New York: Macmillan Co., 1923. Pp. 100. Illus.

The Story of a Great Schoolmaster. By H. G. Wells. New York: Macmillan Co., 1924. Pp. 188.

Self-Proving Business Arithmetic. By Thomas T. Goff. New York: Macmillan Co., 1923. Pp. 332.

Following Columbus. A Primary History. By William L. Nida. New York: Macmillan Co., 1923. Pp. 294.

The Story of Duluth. Published by the Board of Education, Duluth, Minn., 1923. Pp. x+145. Illus.

Health Training in Schools. A Handbook for Teachers and Health Workers. By Theresa Dansdill. New York: National Tuberculosis Association, 370 Seventh Ave., 1923. Pp. 419. $1.00 postpaid.

Les Trois Mousquetaires. Edited by Victor E. Francois. New York: Allyn & Bacon, 1923. Pp. 245. Illus. $.80.

Paris Pittoresque. By Jean Leeman. New York: Allyn & Bacon, 1923. Pp. 205. Illus. $1.20.

Complete French Course. Phonetic edition. By C. A. Chardenal. Revised by Maro S. Brooks. New York: Allyn & Bacon, 1923. Pp. xl+448+71. Illus. $1.60.

IN PAPER COVERS

Introduction to Psychology—A Syllabus. By Walter John Gifford, State Normal School, Harrisonburg, Va.

A Teachers' Manual to the McMurry and Parkins Geographies. By A. E. Parkins. New York: Macmillan Co., 1923.

Books for High School Libraries. A Buying List for Small Schools. Compiled by Martha Wilson, Librarian, Lincoln Library, Springfield, Ill.

Five Questions for American Education Week. Research Bulletin of the N. E. A., Vol. I, No. 4.

School Publicity, A Professional Opportunity and Obligation. Maryland School Bulletin, Vol. V, No. 3. Baltimore, Md.

Eightieth Annual Report of the Detroit Public Schools. Detroit, Mich.: Board of Education, 1923.

Detroit Educational Bulletin, Vol. 7, Nos. 1, 2, 3.

Horace Mann Studies in Education, Vol. I, April, 1923. New York: Horace Mann School, Teachers College.

Course of Study in English, Elementary Schools, Springfield, Mass., 1923.

Course of Study in English, Junior High Schools, Springfield, Mass., 1923.

The Teaching of Fractions. By Edward Wildeman. Chicago: Plymouth Press, 1923. Pp. 145. $.75.

Introduction to the Use of Standardized Tests. By Denton L. Geyer. Chicago: Plymouth Press, 1922. Pp. 95. $.50.

The Story of Human Progress, Part I. By Leon C. Marshall. New York: Macmillan Co., 1923. Pp. 249.

Public School Publicity. By Harlan C. Hines and Robinson G. Jones. New York: Macmillan Co., 1923. Pp. 79.

Cards for Children's French. Yonkers, N. Y.: World Book Co., 1923. Pp. 16, including 61 cards to accompany test. $.28.

The Constant and Variable Errors of Educational Measurements. By Walter S. Monroe. Urbana, Ill.: University of Illinois Bulletin, Vol. XXI, No. 10, November 5, 1923.

Provisions for the Individual Differences of High School Pupils. By Charles W. Odell. Urbana, Ill.: University of Illinois Bulletin, Vol. XXI, No. 4, September 24, 1923.

Preliminary Health Bulletin. Trenton, N. J.: State Department of Education, July, 1923.

The American Association of Teachers Colleges, Year Book, 1922. $.50. May be obtained by writing to J. G. Crabbe, President, Colorado State Teachers College, Greeley, Colo.

Course of Study in English, Years VII–XII. Harrisburg, Pa.: State Department of Education, 1923.

State Course of Study for Rural Schools of Montana. Helena, Mont., 1923.

How to Teach Spelling. By Daniel J. Beeby. Chicago: Plymouth Press, 1923.

Department of the Interior, Bureau of Education Bulletins, 1923: No. 1, *Diagnosis and Treatment of Young School Failures*, by Helen Thompson Woolley and Elizabeth Ferris. No. 2, *A School Building Program for Washington, North Carolina*, by Alice Barrows. No. 3, *History of the Manual Training School of Washington University*, by Charles P. Coates. No. 4, *Junior High Schools of Berkeley, California*. No. 6, *Home Economics Education*, by Henrietta W. Calvin. No. 7, *Educational Work of the Young Men's Christian Association*, by William F. Hirsch. No. 8, *Significant Movements in City School Systems*, by W. S. Deffenbaugh. No. 9, *Supervision of One-Teacher Schools*, by Maud C. Newbury. No. 10, *The Public School System of Arkansas*, Part I, Digest of General Report; No. 11, Part II, Public School Finance. No. 13, *Art Education — The Present Situation*, by Royal Bailey Farnum. No. 14, *Public Education in Oklahoma*. No. 15, *The Bible in the Public Schools*, by William R. Hood. No. 16, *Statistical Survey of Education, 1919–1920*, by Florence DuBois. No. 17, *Educational Surveys*, by Edward F. Buchner. No. 18, *Medical Education, 1920–1922*, by N. P. Colwell, M.D. No. 20, *Recent Advances in Instruction in Music*, by Will Earhart and Charles N. Boyd. No. 21, *Specimen Junior High School Programs of Study*, by W. S. Deffenbaugh. No. 22, *Educational Work of the Knights of Columbus*, by Mark J. Sweany. No. 23, *The Social Studies in Civic Education*, by Edgar Dawson. No. 24, *Educational Extension*, by Charles G. Maphis. No. 25, *Recent Developments in Educational Journalism*, by W. Carson Ryan, Jr. No. 26, *Educational Work of the Young Women's Christian Association*. No. 28, *Vocational Education*, by William T. Bawden. No. 30, *An Americanization Program*, by E. J. Irwin. No. 31, *Americanization in the United States*, by John J. Mahoney. No. 32, *Record of Current Educational Publications, to May 1, 1923*. No. 33, *Educational Hygiene*, by Willard S. Small. No. 34, *Higher Education, 1920–1922*, by George F. Zook. No. 35, *List of Bulletins of the Bureau of Education, 1906–1922*, by Edith A. Wright.